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ABSTRACT

Until transition classes were added to the general education curriculum in 1983-84, few alternative programs directly addressed student's developmental and remedial needs. The Nashville metropolitan schools' transition program, a welcome alternative to grade retention, provides, during the transition-1 (T-1) program, additional time for the maturation of children who are chronologically old enough but deemed unprepared for successful participation in the regular first-grade program. The transition-4 (T-4) program, first implemented in 1985-86, was designed for students who have not mastered the minimum skill requirements for grades 1 to 3; the adjusted curriculum ensures the expansion of each child's social, emotional, physical, and academic development. This document examines T-1 and T-4 student cohorts for the years 1985-86, 1986-87, and 1987-88. Three levels are noted of the California Achievement Test, administered in the regular systemwide testing program prior to changing to the Stanford Early Achievement Test (which was first administered to kindergarten students in 1986-87). Tabular evaluation data indicate that transition class participation improved student attendance and improved student academic achievement after 1 year--significantly diminishing the gap between regular and transition students. Analyses of transition student academic improvement showed solid gains often as high as 80-90 percent. Thirty-nine tables and 36 figures are included. (KM)

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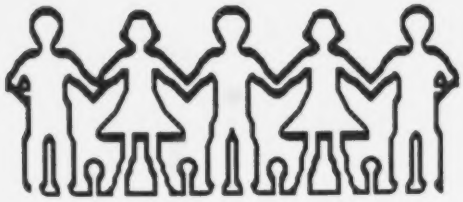
TRANSITION CLASSES



T-1 1985-86 Cohort
T-1 1986-87 Cohort
T-1 1987-88 Cohort

T-4 1985-86 Cohort
T-4 1986-87 Cohort
T-4 1987-88 Cohort

Evaluation Report

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Introduction

Metropolitan Public Schools' transition program began in 1983-84 with 40 T-1 classes. In 1987-88 the program had grown to include 117 classes in T-1, T-4, and T-7. During school year 1988-89 the Transition-7 program was not continued, while T-1 continued with 66 classes and T-4 had 23 classes.

The transition programs provide alternative materials and strategies to improve student readiness to work at the appropriate grade level. Transition-1 is an intervention program while Transition-4 and Transition-7 were designed for remediation. However, all transition programs seek to spare students the stigma of repeating a grade while problems of social immaturity or cognitive skill deficiencies are addressed.

In February 1988 a transition program evaluation report was prepared by the Department of Research and Evaluation of Metropolitan Nashville Public Schools. Figure 1 is from that report and graphically depicts the movement of groups of students through the grade structure. Numbers in parentheses refer to the transition groups since inception of the program. Also noted are the standardized tests administered in the regular system-wide testing program. CAT-10, CAT-11, and CAT-12 denote the three levels of California Achievement Test that were administered prior to changing to Stanford Achievement Test (SAT Primary 1, Primary 2, Primary 3, Intermediate 1, Intermediate 2). SESAT 1

is Stanford Early School Achievement Test, Level 1 which was first administered to kindergarten students in 1986-87.

Figure 2 is a representation of the student cohort groups for T-1 and T-4 as they were followed into school year 1987-88. Six student cohorts were examined in the two sections of this report:

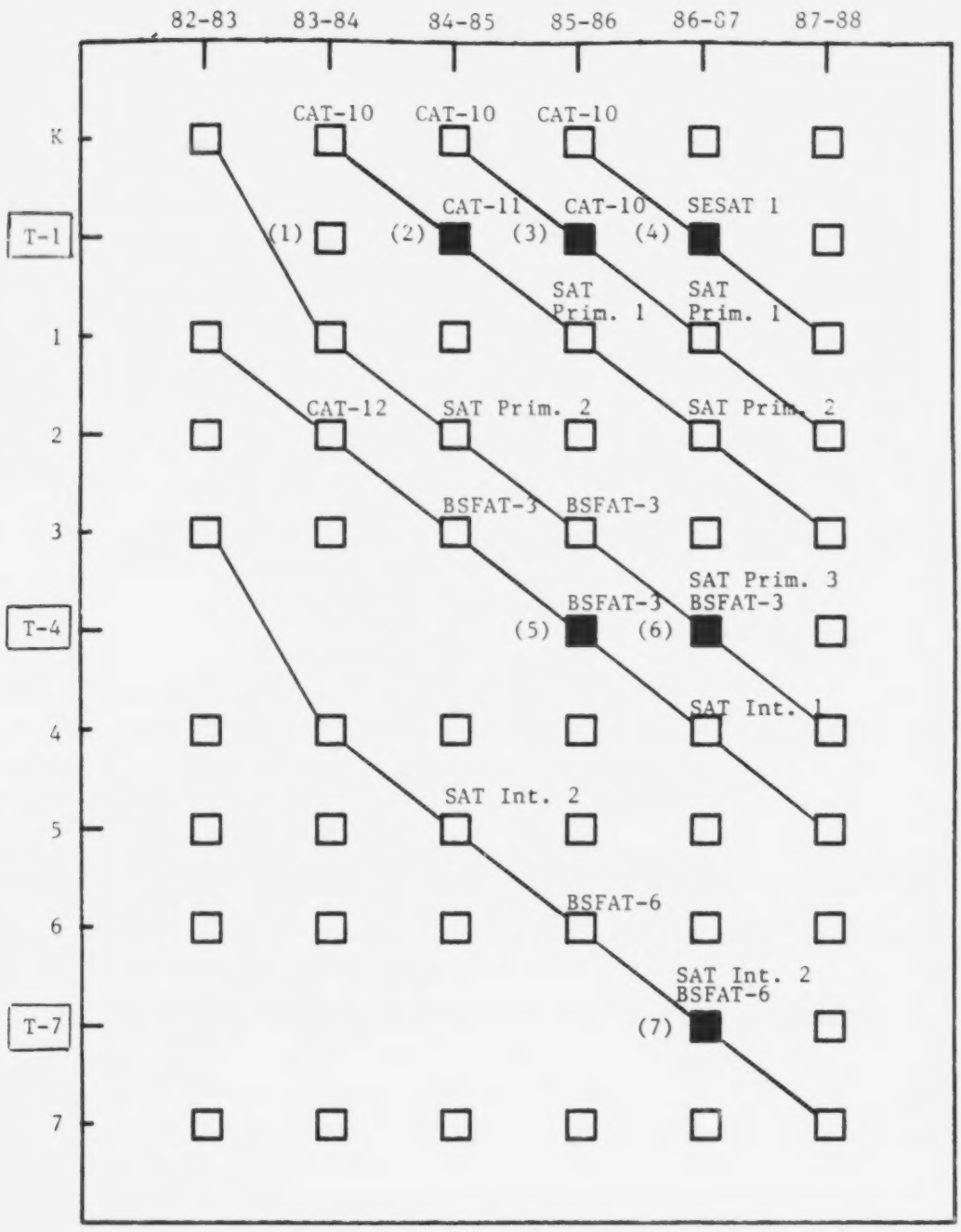
1. Transition 1 (T-1)
   - A. 1985-86 cohort
   - B. 1986-87 cohort
   - C. 1987-88 cohort
2. Transition 4 (T-4)
   - A. 1985-86 cohort
   - B. 1986-87 cohort
   - C. 1987-88 cohort

Three Transition 1 cohorts were examined. Thus, subsections 1A, 1B, and 1C contain the results for 1985-86, 1986-87, and 1987-88, respectively.

Subsections 2A, 2B, and 2C contain discussions of three T-4 cohorts: 1985-86, 1986-87, and 1987-88, respectively.

FIGURE 1. Transition Program History

Progress Chart of T-1, T-4, and T-7 Cohorts



(1) T-1 Cohort #1, 640 students, 40 classes, 32 schools: See First Year Report

(2) T-1 Cohort #2, 670 students, 39 classes, 37 schools: See Section 1A

(3) T-1 Cohort #3, 718 students, 40 classes, 34 schools: See Section 1B

(4) T-1 Cohort #4, 791 students, 47 classes, 37 schools: See Section 1C

(5) T-4 Cohort #1, 281 students, 25 classes, 25 schools: See Section 2A

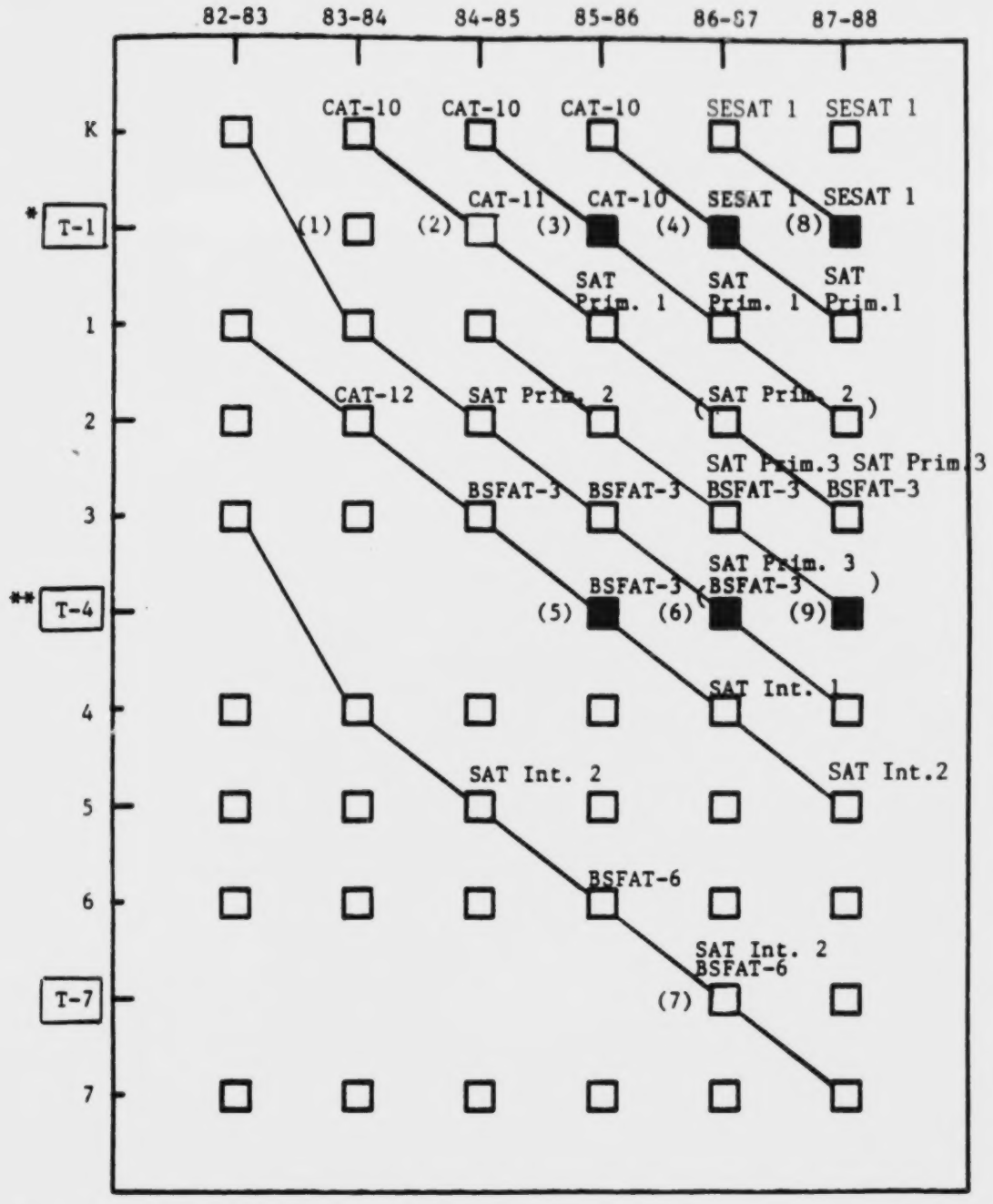
(6) T-4 Cohort #2, 386 students, 30 classes, 28 schools: See Section 2B

(7) T-7 Cohort #1, 280 students, 23 classes, 18 schools: See Section 3A

Note: Numbers refer to students served in transition programs.

FIGURE 2. Transition Program History

1989 Evaluation Report
Progress Chart of T-1 and T-4 Cohorts



*For T-1 Cohorts see: Sections 1A, 1B, and 1C.

**For T-4 Cohorts see: Sections 2A, 2B, and 2C.

(3) T-1 Cohort #3, 718 students, 40 classes, 34 schools: See Section 1A
(4) T-1 Cohort #4, 791 students, 47 classes, 37 schools: See Section 1B
(5) T-4 Cohort #1, 281 students, 25 classes, 25 schools: See Section 2A
(6) T-4 Cohort #2, 386 students, 30 classes, 28 schools: See Section 2B
(8) T-1 Cohort #5, 1070 students, 62 classes, 43 schools: See Section 1C
(9) T-4 Cohort #3, 373 students, 30 classes, 28 schools: See Section 2C

SECTION 1

Transition-One (T-1) Program Evaluation

The Transition-One (T-1) program in Metropolitan Nashville Schools is defined as an alternative educational arrangement designed to meet the developmental and learning needs of students who are chronologically old enough but deemed not ready for successful participation in the regular first grade program. Major goals of the program are to provide additional time for maturation and/or to help students get ready for a successful first grade experience without the stigma of grade retention.

A child needing T-1 may:

1) Have poor self-image
2) Cry easily
3) Resist getting ready for school
4) Experience fatigue in the afternoon
5) Show a lack of fine or gross motor control
6) Have a short attention span
7) Achieve below expectation
8) Lack self-control
9) Experience frustration in kindergarten

To be eligible for T-1, a student must be six years old before September 30th. Students seven years of age before September 30th are not eligible. Students not eligible for the T-1 program are (a) those who have been identified as having a

certifiable handicapping condition, and (b) those who have repeated kindergarten.

Since a major purpose of T-1 is to give a child an additional year in which to grow and develop, the grade placement to follow will generally be regular first grade. Most eligible children are recommended for placement in T-1 during the kindergarten year. However, some children may be identified during the first six weeks of first grade as having a need for the T-1 program.

The T-1 program is highly individualized with attention given to:

Motor Skills--
1) Gross (hopping, skipping)
2) Fine (cutting, using glue)
3) Tracing
4) Putting puzzles together
5) Coloring in defined areas

Language Arts Skills--
1) Visual discrimination
2) Auditory discrimination
3) Listening
4) Speaking
5) Reading
6) Handwriting

Math Skills--
1) Counting
2) Adding/Subtracting
3) Identifying money
4) Telling time

Eligibility for T-1 is determined by consultations among parents, teachers and principals for students lacking first grade readiness. These students may be deficient in social maturity and/or cognitive skills development. Transition classes are limited to 20 students and a teacher aide is provided if a class exceeds 15 students to allow more individual instruction and student/teacher interaction.

Section 1. Transition 1

Many educators are convinced that transitional programs are effective in helping the students attain academic, physical, social and emotional maturity. It should be pointed out, however, that academic achievement of transition students should not be expected to match the achievement of regular first graders at the end of the same year because the "readiness" curriculum of the transition classes differs from the regular first grade curriculum. Academic gains of the transition students hopefully will appear in subsequent years when the academic demands on the students become more stringent. Students, therefore, need to be followed longitudinally.

TRANSITION EVALUATION

Subsection 1A

Transition 1: 1985-86 Cohort

The T-1 database for the 1985-86 cohort included 718 students from 34 schools. Refer to February 1988 evaluation report for complete analysis prior to 1987-88. Data were gathered on these students in 1987-88 in order to provide longitudinal analyses of the long term effectiveness of the T-1 program.

Table 1

Race and Sex Categories in T-1 Cohort of 1985-86

	Number	Percent
Race		
Black	338	47.1
Hispanic	1	0.1
Am. Indian	2	0.3
White	376	52.4
(Unknown)	1	0.1
Total	718	100.0
Sex		
Female	258	35.9
Male	459	63.9
(Unknown)	1	0.1
Total	718	100.0

1A. Transition 1: 1985-86

RESULTS

Evaluation Question 1: What were the attendance rates for the T-1 student cohort as they progressed from grade to grade (T-1 in 1985-86, Grade 1 in 1986-87, grade 2 in 1987-88)?

The average 1985-86 attendance rate for T-1 students was 93.4. Students were absent 10.9 days on the average. The average attendance rate for all Metro students in grades kindergarten through twelve was 93.9. The average attendance rate for all Metro kindergartners was 93.2 for 1985-86.

The average 1986-87 attendance rate for T-1 Cohort students as first graders was 93.7; students were absent 11.0 days on the average. The average attendance rate for all Metro students was 93.4. The average attendance rate for all Metro first graders was 94.4 for 1986-87.

The average 1987-88 attendance rate for T-1 Cohort students as second graders was 93.8; students were absent 10.9 days on the average. The average attendance rate for all Metro students was 93.1. The average attendance rate for all Metro second graders was 94.8 for 1987-88.

TRANSITION EVALUATION

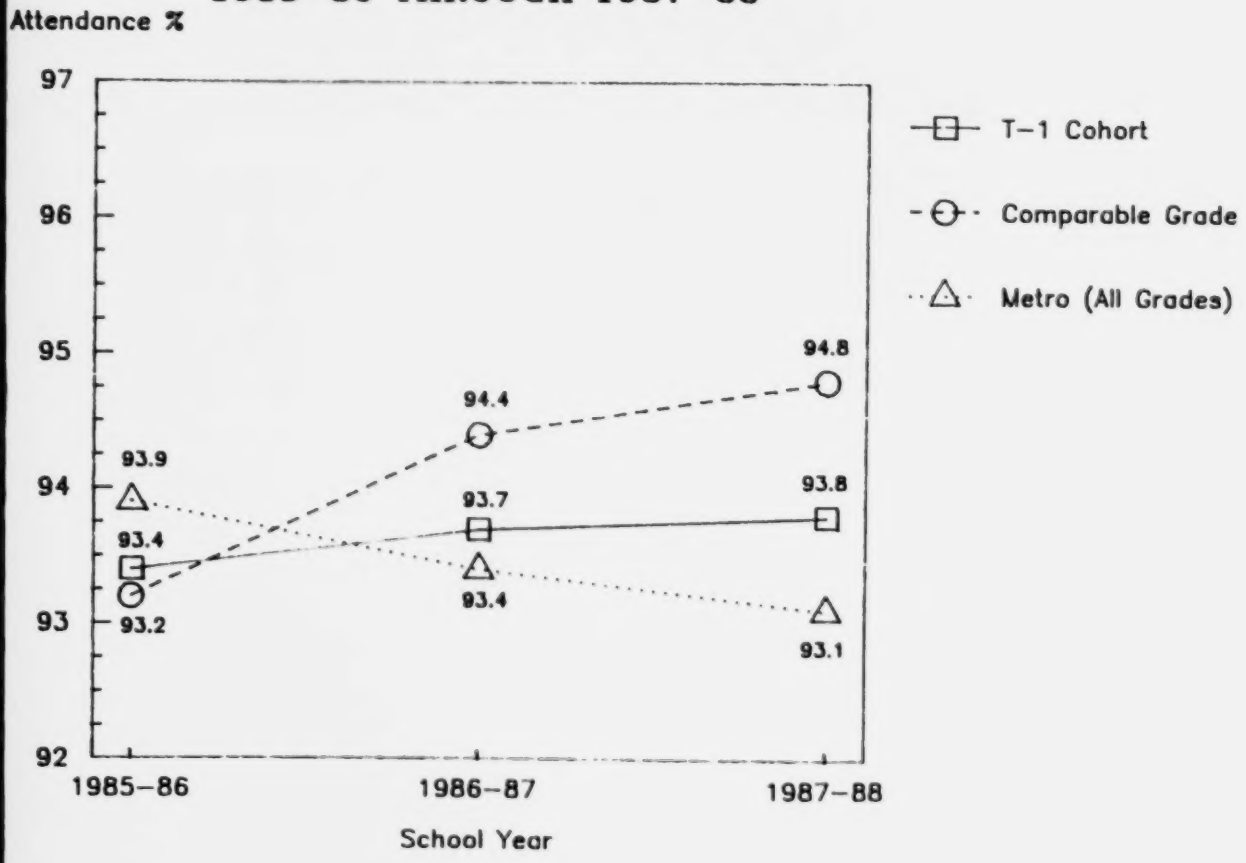
Table 2 summarizes attendance data for the 1985-86 cohort of T-1 students during their T-1, first grade, and second grade years.

Table 2

Attendance Rates for 1985-86 through 1987-88

	1985-86 T-1	1986-87 Grade 1	1987-88 Grade 2
T-1 Cohort	93.4%	93.7%	93.8%
Comparable Grade	93.2%	94.4%	94.8%
Metro (All Grades)	93.9%	93.4%	93.1%

FIGURE 3. PERCENTAGE ATTENDANCE RATES 1985-86 THROUGH 1987-88



1A. Transition 1: 1985-86

TRANSITION EVALUATION

Evaluation Question 2: How much improvement did T-1 students (1985-86 Cohort) make on the California Achievement Test, Level 10 (CAT-10 in kindergarten and T-1) and the Stanford Achievement Test (Primary 1 in first grade and Primary 2 in second grade) ?

This comparison involves analyses of kindergarten (spring 1985) scores and T-1 (spring 1986) scores on the CAT-10 for Total Pre-Reading and for Mathematics. Spring 1987 results for grade 1 are also reported on Stanford Primary 1. Tables 3 and 4 show the number and percentage of students who scored at each stanine level for the four occasions of testing. Further analyses addressing Evaluation Question 2 are shown in Tables 5 and 6.

Table 3

Number and Percentage of Students
Scoring at Each Stanine Level of
CAT-10 for Spring 1985, CAT-10 for Spring 1986,
Stanford Primary 1 for Spring 1987,
and Stanford Primary 2 for Spring 1988
in Total Reading

STANINE	TOTAL READING							
	Spring '85 CAT-10 Kindergarten		Spring '86 CAT-10 Transition 1		Spring '87 SAT Prim. 1 First Grade		Spring '88 SAT Prim. 2 Second Grade	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Low								
1	68	(11.8)	3	(0.4)	16	(2.7)	4	(1.0)
2	95	(16.6)	5	(0.7)	39	(6.6)	28	(7.1)
3	148	(25.8)	17	(2.5)	86	(14.6)	61	(15.5)
	311	(54.2)	25	(3.6)	141	(23.9)	93	(23.6)
Average								
4	131	(22.8)	56	(8.2)	139	(23.6)	122	(31.0)
5	67	(11.7)	77	(11.3)	145	(24.5)	88	(22.3)
6	27	(4.7)	103	(15.1)	78	(13.2)	47	(11.9)
	225	(39.2)	236	(34.6)	362	(61.3)	257	(65.2)
High								
7	24	(4.2)	160	(23.4)	54	(9.2)	26	(6.6)
8	4	(.7)	85	(12.4)	18	(3.1)	11	(2.8)
9	10	(1.7)	178	(26.0)	15	(2.5)	7	(1.8)
	38	(6.6)	423	(61.8)	87	(14.8)	44	(11.2)
TOTAL	574	(100%)	684	(100%)	590	(100%)	394	(100%)

TRANSITION EVALUATION

Table 4

Number and Percentage of Students
Scoring at Each Stanine Level of
CAT-10 for Spring 1985, CAT-10 for Spring 1986,
Stanford Primary 1 for Spring 1987,
and Stanford Primary 2 for Spring 1988
in Total Mathematics

STANINE	TOTAL MATHEMATICS							
	Spring '85 CAT-10 Kindergarten		Spring '86 CAT-10 Transition 1		Spring '87 SAT Prim. 1 First Grade		Spring '88 SAT Prim. 2 Second Grade	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Low								
1	37	(6.3)	2	(0.3)	32	(5.4)	15	(3.8)
2	134	(22.7)	11	(1.6)	53	(9.0)	26	(6.5)
3	124	(21.1)	24	(3.5)	85	(14.4)	38	(9.0)
	295	(50.1)	37	(5.4)	170	(28.8)	79	(19.9)
Average								
4	130	(22.1)	87	(12.7)	111	(18.8)	76	(19.1)
5	67	(11.4)	78	(11.4)	135	(23.0)	103	(25.9)
6	38	(6.5)	91	(13.3)	92	(15.6)	58	(14.6)
	235	(40.0)	256	(37.4)	338	(57.4)	237	(59.6%)
High								
7	30	(5.1)	130	(19.0)	49	(8.3)	37	(9.3)
8	20	(3.4)	150	(21.8)	18	(3.1)	22	(5.5)
9	8	(1.4)	112	(16.4)	14	(2.4)	22	(5.5)
	58	(9.9)	392	(57.2)	81	(13.8)	81	(20.3)
TOTAL	588	(100%)	685	(100%)	589	(100%)	397	(100%)

1A. Transition 1: 1985-86

Table 5 reports average stanines and Normal Curve Equivalent (NCE) Score and standard deviations for CAT-10 scores of spring 1985 and spring 1986, Stanford Primary 1 scores of spring 1987, and Stanford Primary 2 scores of spring 1988.

Table 5
Averages and Standard Deviations for
Reading and Mathematics Scores
Spring 1985 (Kindergarten),
Spring 1986 (Transition 1), and
Spring 1987 (First Grade)
Spring 1988 (Second Grade)

	TOTAL READING				MATHEMATICS			
	Spring				Spring			
	1985 CAT-10 K	1986 CAT-10 T-1	1987 SAT P1 1st	1988 SAT P2 2nd	1985 CAT-10 K	1986 CAT-10 T-1	1987 SAT P1 1st	1988 SAT P2 2nd
Number T-1 Students	574	684	590	394	588	685	589	397
Stanines								
Metro Avg.	6.05	6.26	5.35	5.59	6.50	6.75	5.14	6.16
T-1 Avg.	3.51	6.86	4.68	4.53	3.75	6.57	4.55	4.99
Standard Deviation	1.73	1.80	1.71	1.56	1.83	1.87	1.84	1.92
Normal Curve Equivalent Scores (NCE)								
Average	33.85	70.07	46.28	44.89	36.93	66.96	45.04	49.75
%ile Rank of NCE Avg.	22	83	43	40	27	79	41	49
NCE Standard Deviation	18.86	19.51	17.91	16.05	19.33	20.51	19.55	20.55

Figures 4 and 5 graphically represent the average stanines for the data shown in Table 5.

FIGURE 4. TOTAL READING MEAN STANINE SCORES 1984–85 THROUGH 1987–88

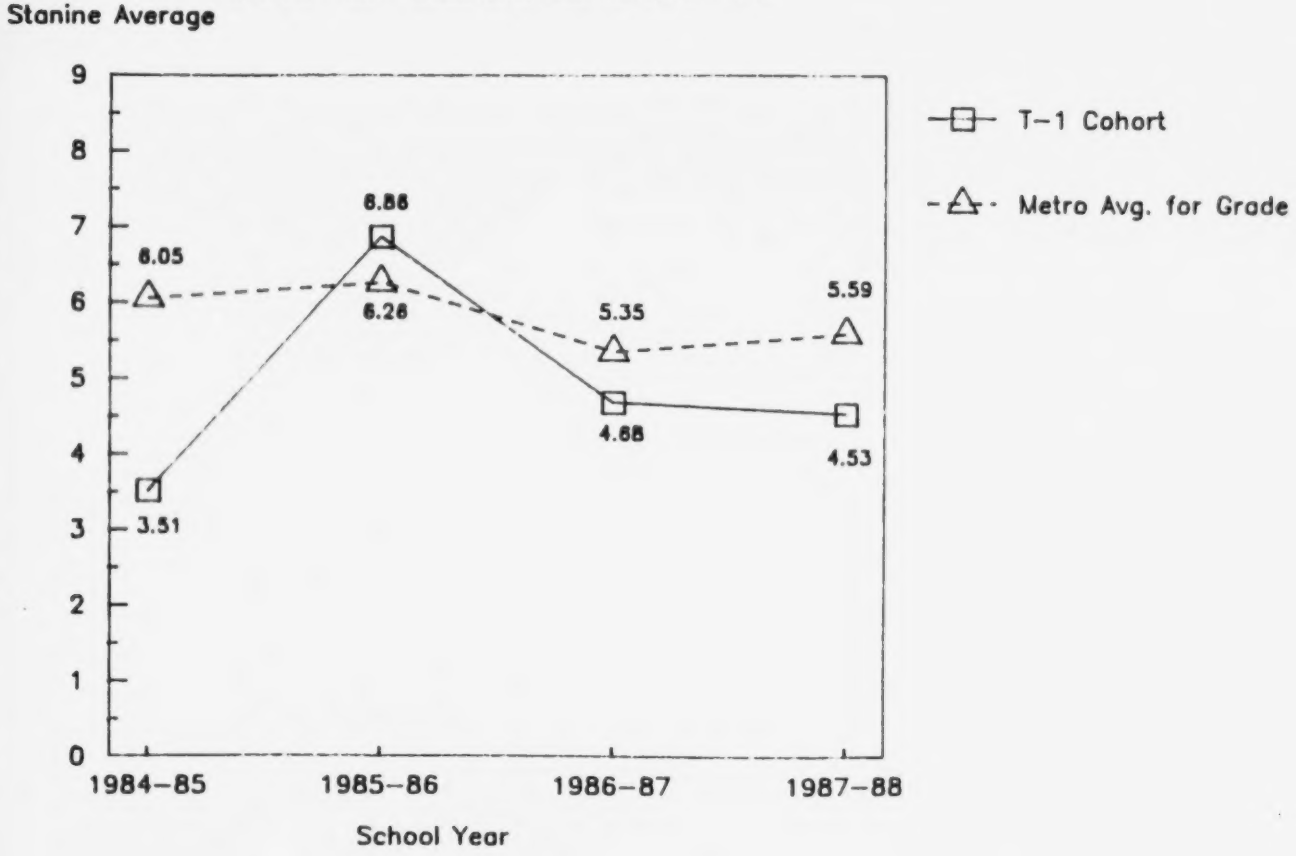
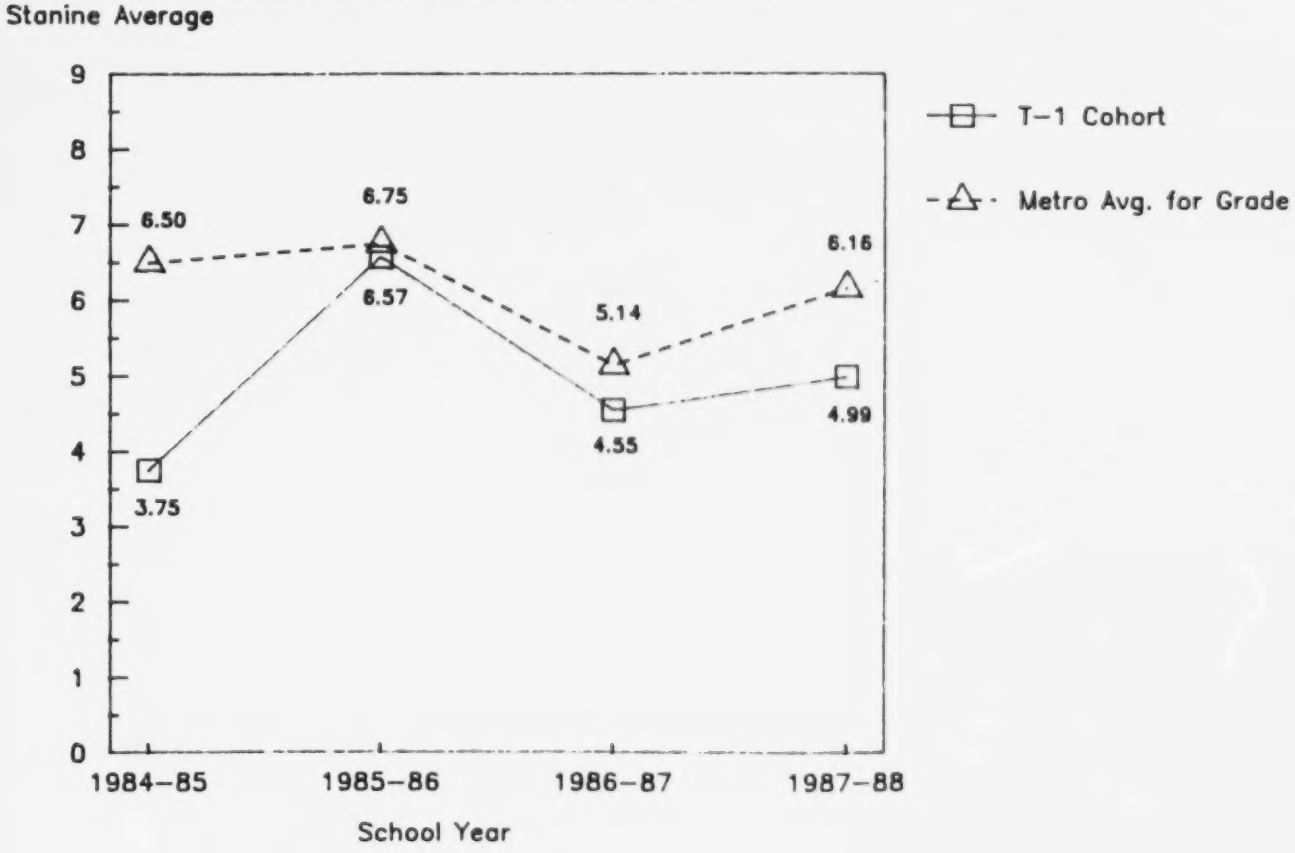


FIGURE 5. TOTAL MATHEMATICS MEAN STANINE SCORES 1984–85 THROUGH 1987–88



1A. Transition 1: 1985-86

TRANSITION EVALUATION

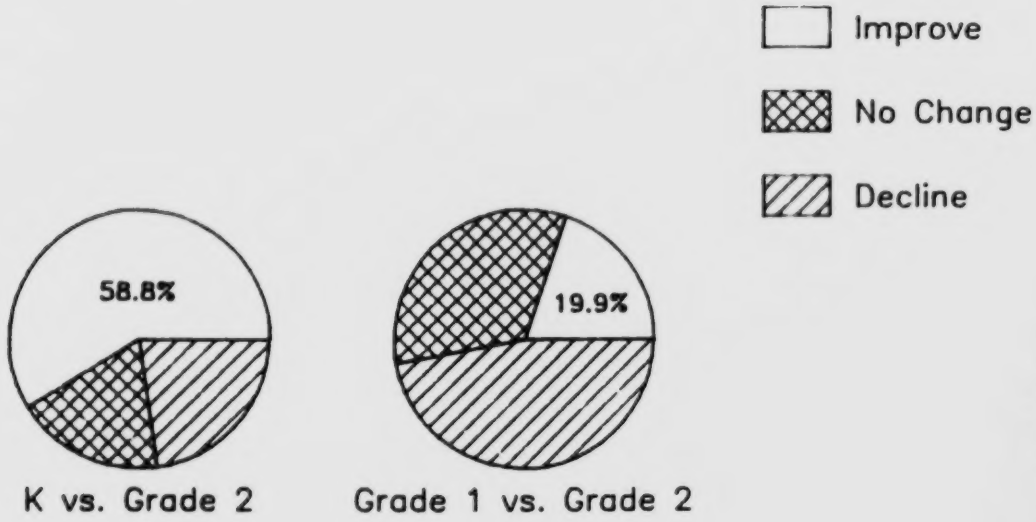
Table 6 gives the number and percentage of students who improved their performance on Total Pre-Reading and Mathematics from spring kindergarten (1985) to spring second grade (1988), and from spring first grade (1987) to spring second grade (1988).

Table 6

Number and Percentage of Students Who Improved in Total Reading and Total Mathematics Based on Stanine Categories

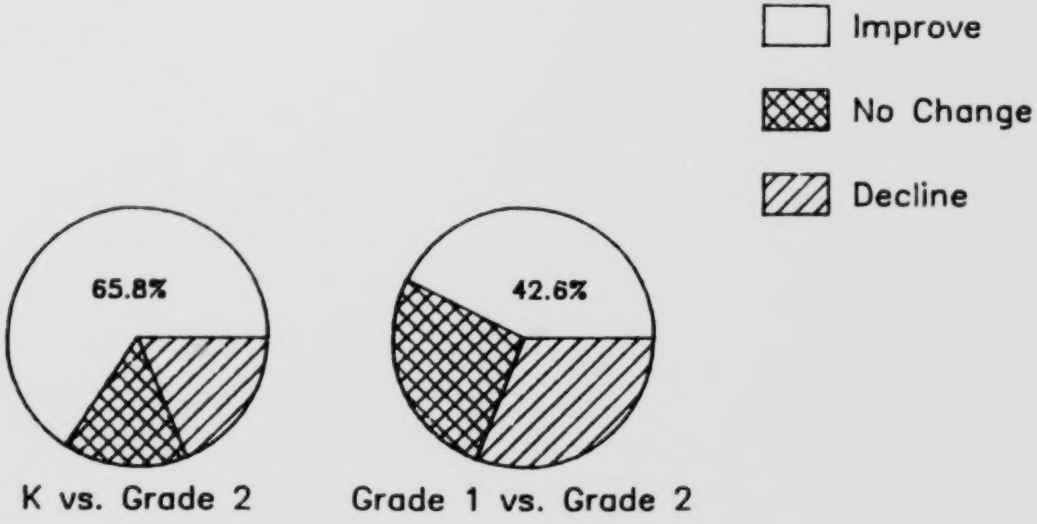
	Spring 1985 - 1988 Kindergarten-2nd Grade		Spring 1987 - 1988 First Grade - Second Grade	
	N	%	N	%
TOTAL READING				
Improved	194	58.8	74	19.9
No Change	61	18.5	123	33.1
Declined	75	22.7	175	47.0
	330	100.0	372	100.0
Wilcoxon Sign Ranks Test	z = -8.41	p =.000	z = - 6.28	p =.000
TOTAL MATHEMATICS				
Improved	221	65.8	159	42.6
No Change	52	15.5	99	26.5
Declined	63	18.8	115	30.8
	336	100.0	373	100.0
Wilcoxon Sign Ranks Test	z = -9.18	p =.000	z = - 1.74	p =.082

FIGURE 6. CHANGES IN STANINE CATEGORIES
Total Reading: T–1 Cohort, 1985–86



1A. Transition 1: 1985-86

FIGURE 7. CHANGES IN STANINE CATEGORIES
Total Mathematics: T–1 Cohort, 1985–86



Subsection 1B

Transition 1: 1986-87 Cohort

The T-1 database for the 1986-87 cohort included 714 students from 37 schools. Consult the February 1988 evaluation report to see the initial results for this student cohort.

Table 7

Race and Sex Categories in T-1 Cohort of 1986-87

	Number	Percent
Race		
Black	324	45.4
Hispanic	5	.7
Am.Indian	3	.4
White	379	53.1
(Unknown)	3	.4
Total	714	100.0
Sex		
Female	294	41.2
Male	417	58.4
(Unknown)	3	.4
Total	714	100.0

RESULTS

Evaluation Question 1: What were the attendance rates for the T-1 student cohort as they progressed from grade to grade (kindergarten in 1985-86, T-1 in 1986-87, and Grade 1 in 1987-88)?

During their kindergarten year, average 1985-86 attendance rate for T-1 students was 91.3%; students were absent 14.7 days on the average. The average attendance rate for all Metro students was 93.9%. The average attendance rate for all Metro kindergarten students was 93.2% for 1985-86.

The average 1986-87 attendance rate for T-1 students was 93.4%; students were absent 11.4 days on the average. The average attendance rate for all Metro students was 93.4%. The average attendance rate for all Metro kindergartners was 93.0% for 1986-87.

The average 1987-88 attendance rate for first grade students who had been in T-1 was 93.8%; students were absent 10.9 days on the average. The average attendance rate for all Metro students in grades kindergarten through twelve was 93.1%. The average attendance rate for all Metro first graders was 94.2% for 1987-88.

Table 8 and Figure 8 display attendance data for the 1986-87 cohort of T-1 students during their kindergarten, T-1, and first grade years.

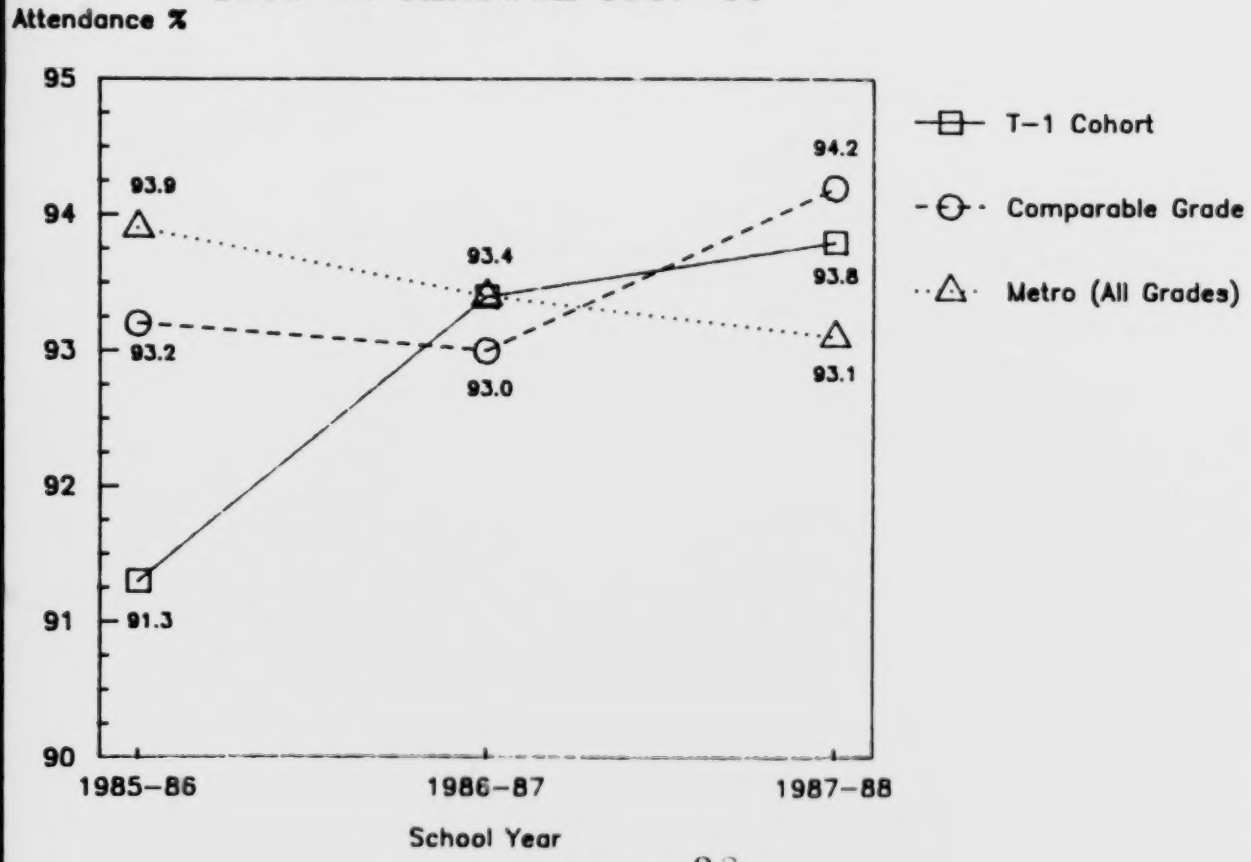
1B. Transition 1: 1986-87

Table 8

Attendance Rates for 1985-86, 1986-87, and 1987-88

	1985-86 K	1986-87 T-1	1987-88 Grade 1
T-1 Cohort	91.3%	93.4%	93.8%
Comparable Grade	93.2%	93.0%	94.2%
Metro (All Grades)	93.9%	93.4%	93.1%

FIGURE 8. PERCENTAGE ATTENDANCE RATES 1985-86 THROUGH 1987-88



1B. Transition 1: 1986-87

Evaluation Question 2: How much improvement did T-1 students (1986-87 Cohort) make on the California Achievement Test, Level 10 (CAT-10) in kindergarten compared to the Stanford Early School Achievement Test (SESAT 1) in T-1 and Stanford Primary 1 in first grade ?

This comparison involves an analysis of CAT-10 kindergarten (spring 1986) scores, SESAT 1 T-1 (midyear 1987) scores, and Stanford Primary 1 first grade (spring 1988) scores for Total Reading. Total Mathematics scores were not available for T-1 (1986-87) because most of the kindergarten and T-1 students were not administered the optional Part B of the SESAT 1 mathematics test; thus, no Total Mathematics scores were available for that year.

Tables 9 and 10 show the number and percentage of students who scored at each stanine level for the three occasions of testing for Reading and Mathematics, respectively. Further analysis addressing Evaluation Question 2 is shown in Tables 11 and 12.

Table 9

Number and Percentage of Students
Scoring at Each Stanine Level of
California Achievement Test (CAT-10) Spring 1986,
Stanford Early School Achievement Test (SESAT 1) for Midyear 1987
Stanford Primary 1 for Spring 1988
in Total Reading

STANINE	TOTAL READING					
	Spring '86 CAT-10 Kindergarten		Midyear '87 SESAT 1 Transition 1		Spring '88 SAT Prim. 1 First Grade	
	No.	(%)	No.	(%)	No.	(%)
Low						
1	46	(8.1)	6	(0.9)	12	(2.1)
2	71	(12.4)	4	(0.6)	33	(5.7)
3	130	(22.8)	19	(2.9)	74	(12.7)
	247	(43.3)	29	(4.4)	119	(20.5)
Average						
4	128	(22.4)	41	(6.3)	129	(22.1)
5	89	(15.6)	58	(8.9)	141	(24.2)
6	52	(9.1)	130	(19.8)	100	(17.2)
	269	(47.1)	229	(35.0)	370	(63.5)
High						
7	36	(6.3)	205	(31.3)	46	(7.9)
8	12	(2.1)	118	(18.0)	32	(5.5)
9	7	(1.2)	74	(11.3)	16	(2.7)
	55	(9.6)	397	(60.6)	94	(16.1)
TOTAL	571	(100%)	655	(100%)	583	(100%)

Table 10

Number and Percentage of Students
Scoring at Each Stanine Level of
California Achievement Test (CAT-10) Spring 1986,
Stanford Early School Achievement Test (SESAT 1) for Midyear 1987
Stanford Primary 1 for Spring 1988
in Total Mathematics

STANINE	TOTAL MATHEMATICS					
	Spring '86 CAT-10 Kindergarten		Midyear '87 SESAT 1 Transition 1		Spring '88 SAT Prim. 1 First Grade	
	No.	(%)	No.	(%)	No.	(%)
Low						
1	31	(5.4)	na		14	(2.4)
2	114	(19.6)	na		38	(6.5)
3	103	(17.8)	na		77	(13.2)
	248	(42.8)	na		129	(22.1)
Average						
4	144	(24.8)	na		99	(16.9)
5	69	(11.9)	na		143	(24.4)
6	51	(8.8)	na		116	(19.8)
	264	(45.5)	na		358	(61.1)
High						
7	31	(5.4)	na		60	(10.3)
8	27	(4.7)	na		21	(3.6)
9	79	(1.3)	___		17	(2.9)
	67	(11.7)			98	(16.8)
TOTAL	579	(100%)			585	(100%)

TRANSITION EVALUATION

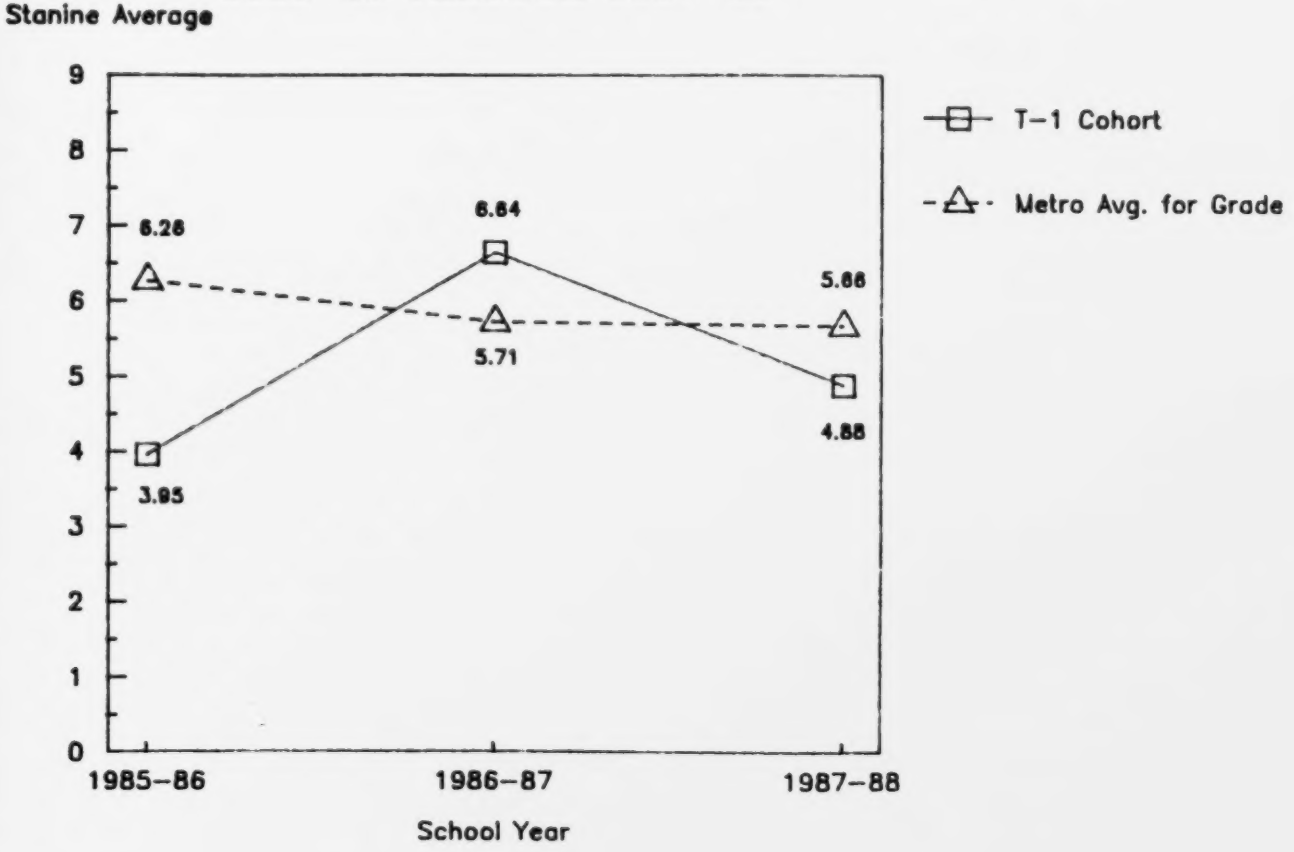
Table 11 reports average stanines and Normal Curve Equivalent (NCE) Scores and standard deviations for the CAT-10 Reading scores of spring 1986, SESAT 1 scores of midyear 1987, and Stanford Primary 1 scores for spring 1988. Likewise scores are reported for Total Mathematics, except for midyear 1987 for which Total Mathematics scores were not computed, as explained above.

Table 11
Averages and Standard Deviations for Reading Scores
Spring 1986 (Kindergarten), Midyear 1987 (Transition 1),
and Spring 1988 (Grade 1)

	TOTAL READING			TOTAL MATHEMATICS		
	Spr. '86 CAT-10 Kinder'n	Mid. '87 SESAT 1 T-1	Spr. '88 SAT P 1 Gr. 1	Spr. '86 CAT-10 Kinder'n	Mid. '87 SESAT 1 T-1	Spr. '88 SAT P 1 Gr. 1
Number T-1 Students	571	655	583	579	na	583
Stanines						
Metro Average	6.26	5.71	5.66	na	na	5.44
T-1 Average	3.95	6.64	4.88	3.99	na	4.90
Standard Deviation	1.78	1.60	1.73	1.88	na	1.75
Normal Curve Equivalent (NCE) Scores						
NCE Average	38.66	66.54	48.47	39.63	na	48.99
%ile Rank of NCE Average	29	78	47	31	na	48
Standard Deviation (NCE)	18.87	16.70	18.11	19.56	na	18.69

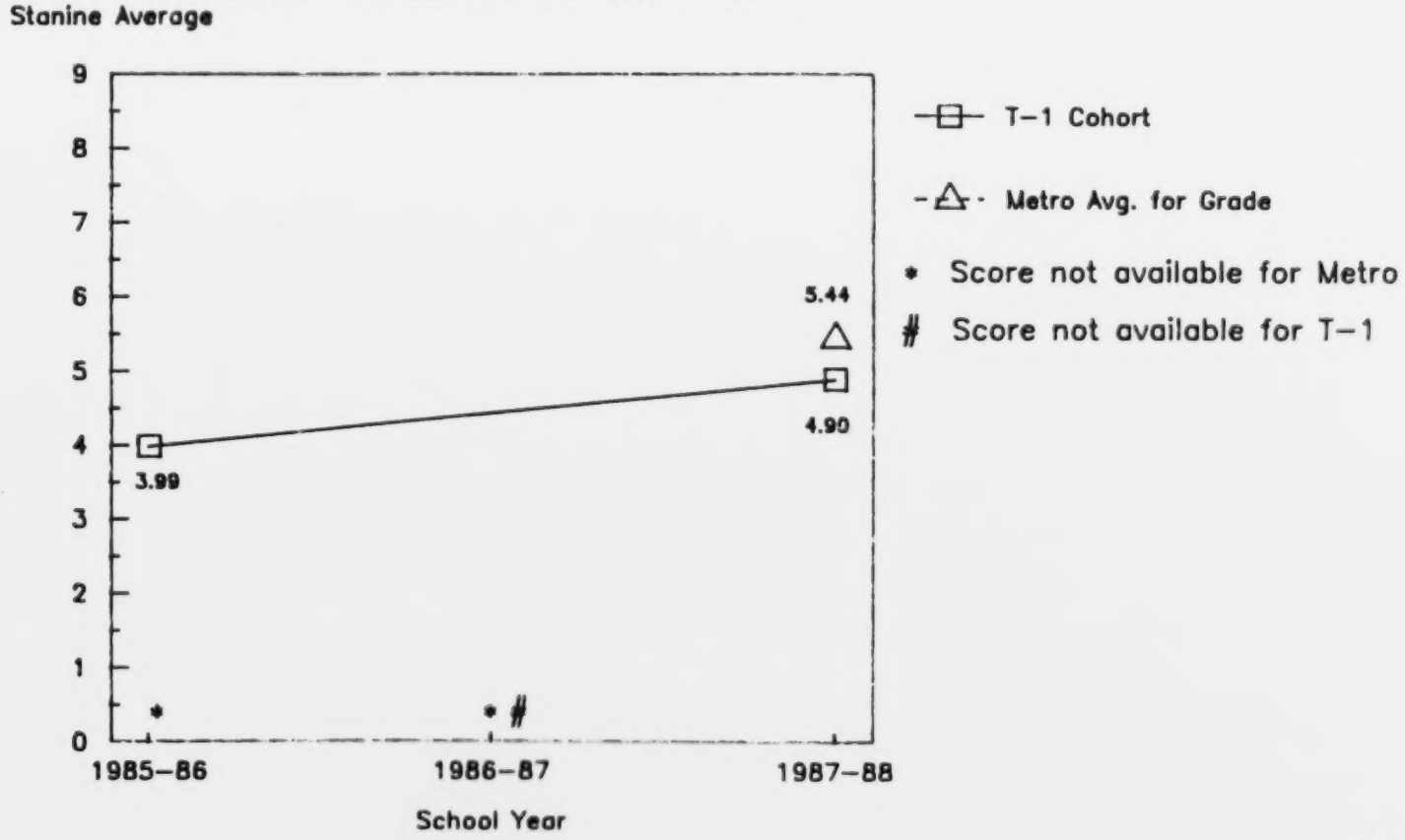
Figures 9 and 10 graphically represents the average stanines for the data shown in Table .

FIGURE 9. TOTAL READING MEAN STANINE SCORES 1985–86 THROUGH 1987–88



1B. Transition 1: 1986-87

FIGURE 10. TOTAL MATHEMATICS MEAN STANINE SCORE 1985-86 THROUGH 1987-88



1B. Transition 1: 1986-87

Table 12 gives the number and percentage of students who improved their performance on Total Reading and Total Mathematics from spring kindergarten (1986) to midyear T-1 (1987) and spring first grade (1988).

Table 12

Number and Percentage of Students Who Improved in Total Reading and Total Mathematics Based on Stanines 1986 vs. 1987 and 1986 vs. 1988

	Spring '86 vs. Midyear '87 Kindergarten - Transition 1		Spring '86 vs. Spring '88 Kindergarten - Grade 1	
	N	%	N	%
TOTAL READING				
Improved	492	91.5%	292	60.5%
No Change	32	5.9%	84	17.4%
Declined	14	2.6%	107	22.2%
	538	100.0%	483	100.0%
Wilcoxon Sign Ranks Test	z = -19.20	p = .000	z = -9.90	p = .000
TOTAL MATHEMATICS				
Improved	na		290	59.1%
No Change	na		91	18.5%
Declined	na		110	22.4%
	na		491	100.0%
Wilcoxon Sign Ranks Test			z = -9.07	p = .000

FIGURE 11. CHANGES IN STANINE CATEGORIES
Total Reading: T–1 Cohort, 1986–87

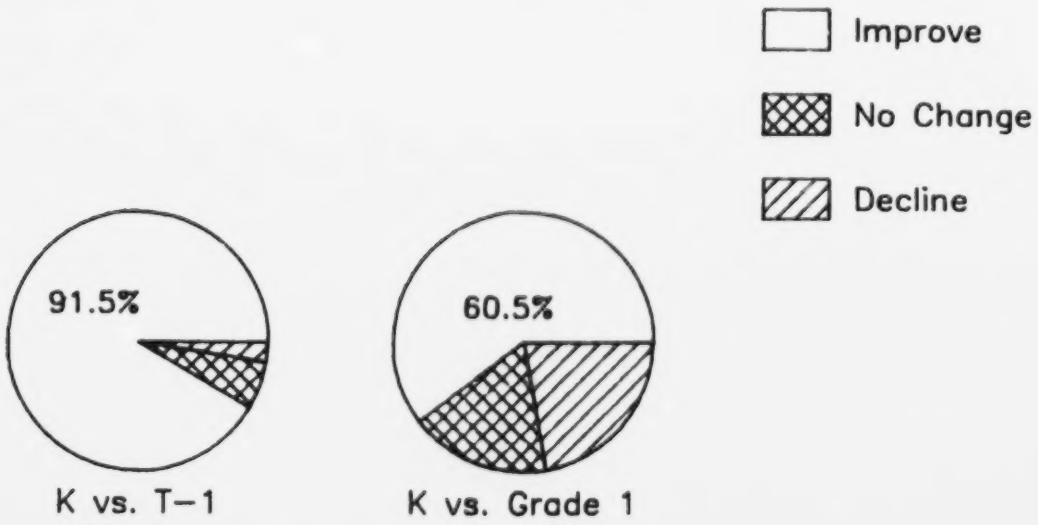
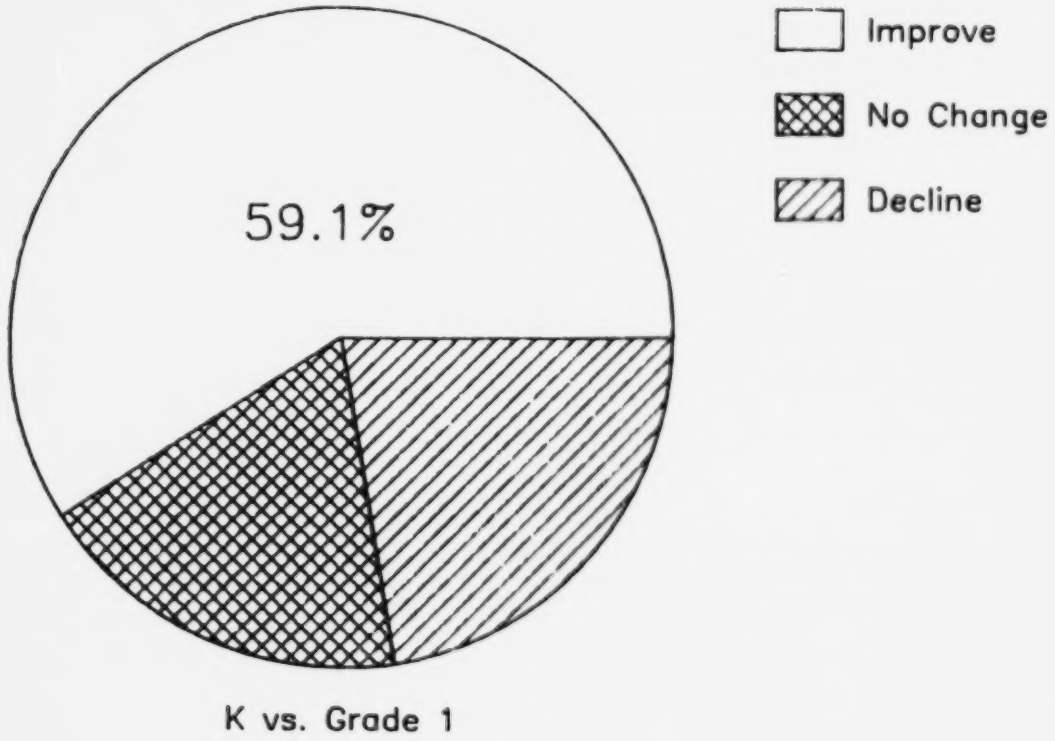


FIGURE 12. CHANGES IN STANINE CATEGORIES
Total Mathematics: T–1 Cohort, 1986–87



Subsection 1C

Transition 1: 1987-88 Cohort

The T-1 database for the 1987-88 cohort included 1314 students from 43 schools. Race and sex categories are shown in Table .

Table 13

Race and Sex Categories in T-1 Cohort of 1987-88

	Number	Percent
Race		
Black	431	42.1
Hispanic	4	.4
Asian	13	1.3
White	576	56.3
Total	1024	100.0
Sex		
Female	406	39.6
Male	618	60.4
Total	1024	100.0

RESULTS

Evaluation Question 1: What were the attendance rates for the T-1 cohort as kindergartners and as first graders ?

During their kindergarten year, average 1986-87 attendance rate for T-1 students was 91.4%; students were absent 14.9 days on the average. The average attendance rate for all Metro students in grades kindergarten through grade twelve was 93.4%. The average attendance rate for all Metro kindergarten students was 93.0% for 1986-87.

The average 1987-88 attendance rate for T-1 students was 93.1%; students were absent 10.6 days on the average. The average attendance rate for all Metro students in grades kindergarten through twelve was 93.1%. The average attendance rate for all Metro kindergartners was 92.9% for 1987-88.

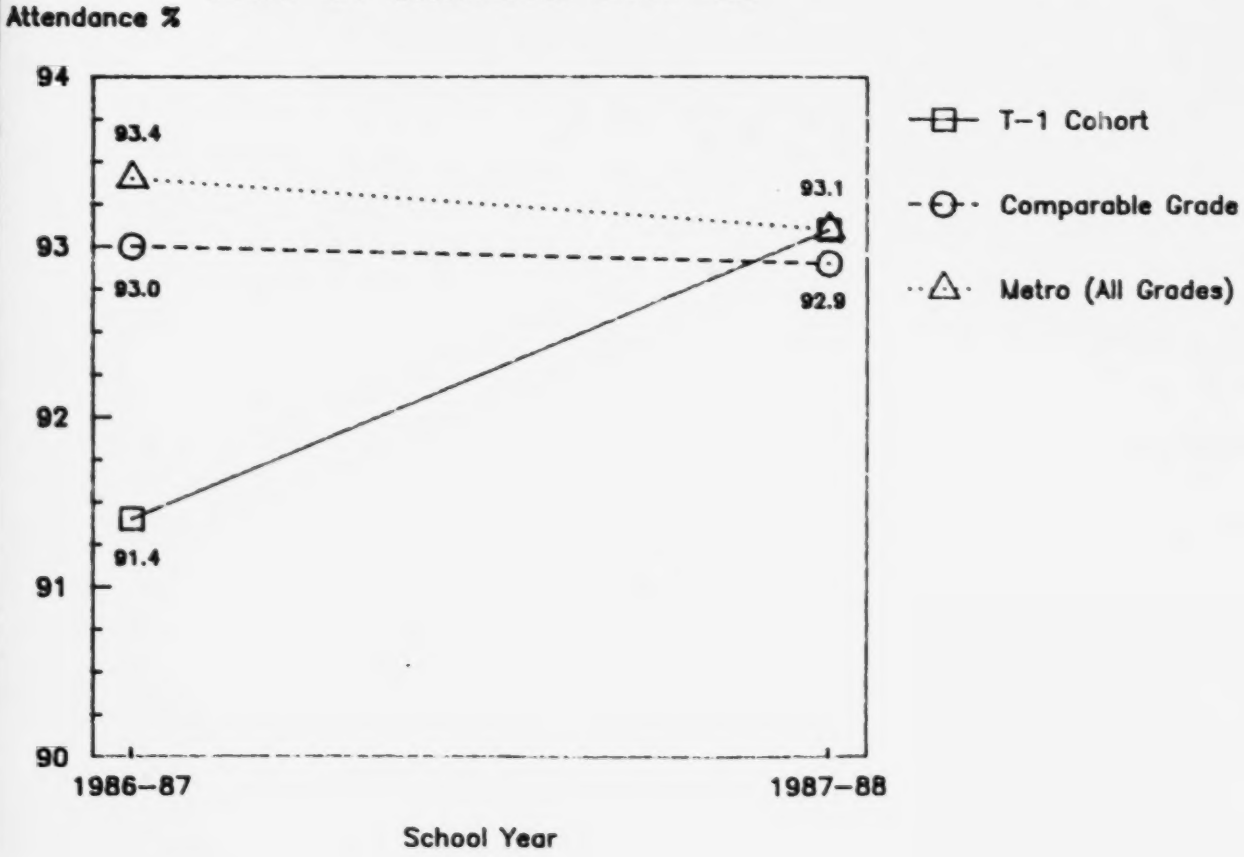
Table 14 and Figure 13 display attendance data for the 1987-88 cohort of T-1 students during their kindergarten and T-1 years.

Table 14

Attendance Rates for 1986-87 and 1987-88

	1986-87 K	1987-88 T-1
T-1 Cohort	91.4%	93.1%
Comparable Grade	93.0%	92.9%
Metro (All Grades)	93.4%	93.1%

FIGURE 13. PERCENTAGE ATTENDANCE RATES 1986-87 THROUGH 1987-88



1C. Transition 1: 1987-88

Evaluation Question 2: How much improvement did T-1 students (1987-88 cohort) make on the Stanford Early School Achievement Test (SESAT 1) from kindergarten to T-1?

Tables 15 and 16 show the number and percentage of students who scored at each stanine level for the two occasions of testing. Total Mathematics scores were not available for kindergarten (1986-87) or T-1 (1987-88) because most of the kindergarten and T-1 students were not administered the optional Part B of the SESAT 1 mathematics test; thus, no Total Mathematics scores were available for those years. However, Mathematics Part A, consisting of 28 relatively easy items testing basic number concepts was administered to 842 kindergartners and 877 T-1 students.

Table 15

Number and Percentage of Students
Scoring at Each Stanine Level of
Stanford Early School Achievement Test (SESAT 1)
for Midyear 1987 (Kindergarten) and Midyear 1988 (T-1)
in Total Reading

STANINE	TOTAL READING			
	Midyear '87 SESAT 1 Kindergarten		Midyear '88 SESAT 1 Transition 1	
	No.	(%)	No.	(%)
Low				
1	65	(7.8)	4	(0.5)
2	155	(18.5)	13	(1.5)
3	217	(26.0)	35	(4.0)
	437	(52.3)	52	(6.0)
Average				
4	166	(19.9)	63	(7.2)
5	118	(14.1)	85	(9.7)
6	69	(8.3)	158	(18.0)
	353	(42.3)	306	(34.9)
High				
7	35	(4.2)	208	(23.7)
8	11	(1.3)	191	(21.8)
9	0	(.0)	121	(13.8)
	46	(5.5)	520	(59.3)
TOTAL	836	(100%)	878	(100%)

Table 16

Number and Percentage of Students
Scoring at Each Stanine Level of
Stanford Early School Achievement Test (SESAT 1)
for Midyear 1987 (Kindergarten) and Midyear 1988 (T-1)
in Mathematics, Part A

STANINE	Mathematics, Part A			
	Midyear '87 SESAT 1 Kindergarten		Midyear '88 SESAT 1 Transition 1	
	No.	(%)	No.	(%)
Low				
1	135	(16.0)	13	(1.5)
2	192	(22.8)	22	(2.5)
3	215	(25.5)	81	(9.2)
	542	(64.3)	116	(13.2)
Average				
4	126	(15.0)	73	(8.3)
5	103	(12.2)	196	(22.3)
6	59	(7.0)	227	(25.9)
	288	(34.2)	496	(56.5)
High				
7	3	(.4)	86	(9.8)
8	7	(.8)	93	(10.6)
9	2	(.2)	86	(9.8)
	12	(1.4)	265	(30.2)
TOTAL	842	(100%)	877	(100%)

TRANSITION EVALUATION

Table 17 reports average stanines and Normal Curve Equivalent (NCE) scores and standard deviations for the SESAT 1 scores of midyear 1987 and midyear 1988.

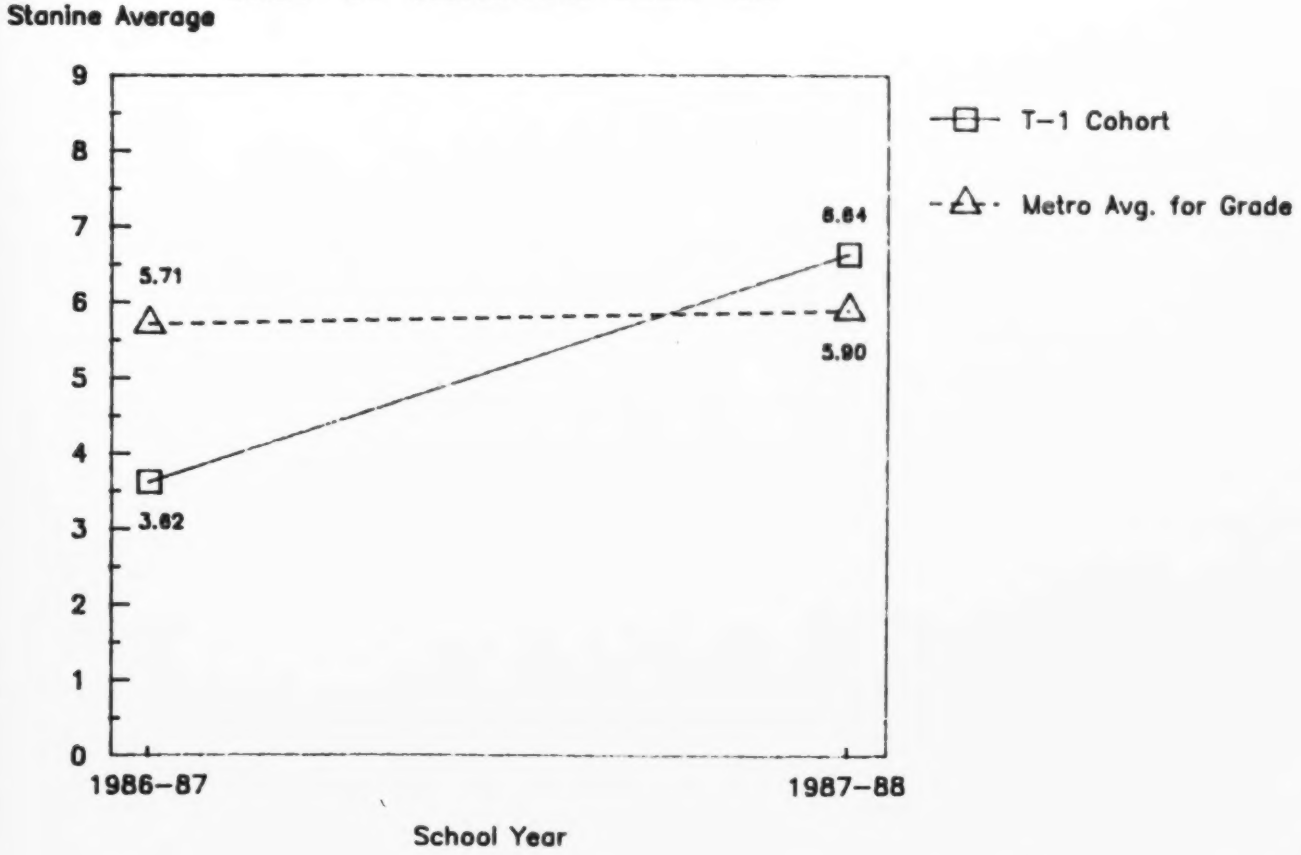
Table 17

Averages and Standard Deviations for
Reading and Mathematics Scores
Midyear 1987 (Kindergarten)
Midyear 1988 (Transition 1)

	TOTAL READING		MATHEMATICS, PART A	
	Midyr.'87 SESAT 1 Kinderg'n	Midyr. '88 SESAT 1 T-1	Midyr. '87 SESAT 1 Kinderg'n	Midyr.'88 SESAT 1 T-1
Number T-1 Students	836	878	842	877
Stanines				
Metro Average Stanine	5.71	5.90	5.11	5.27
T-1 Average Stanine	3.62	6.64	3.12	5.76
Standard Deviation	1.62	1.74	1.57	1.87
Normal Curve Equivalent (NCE) Scores				
NCE Average	34.67	66.79	30.25	58.87
%ile Rank of NCE Avg.	23	79	17	66
Standard Deviation (NCE)	17.56	17.93	17.15	20.22

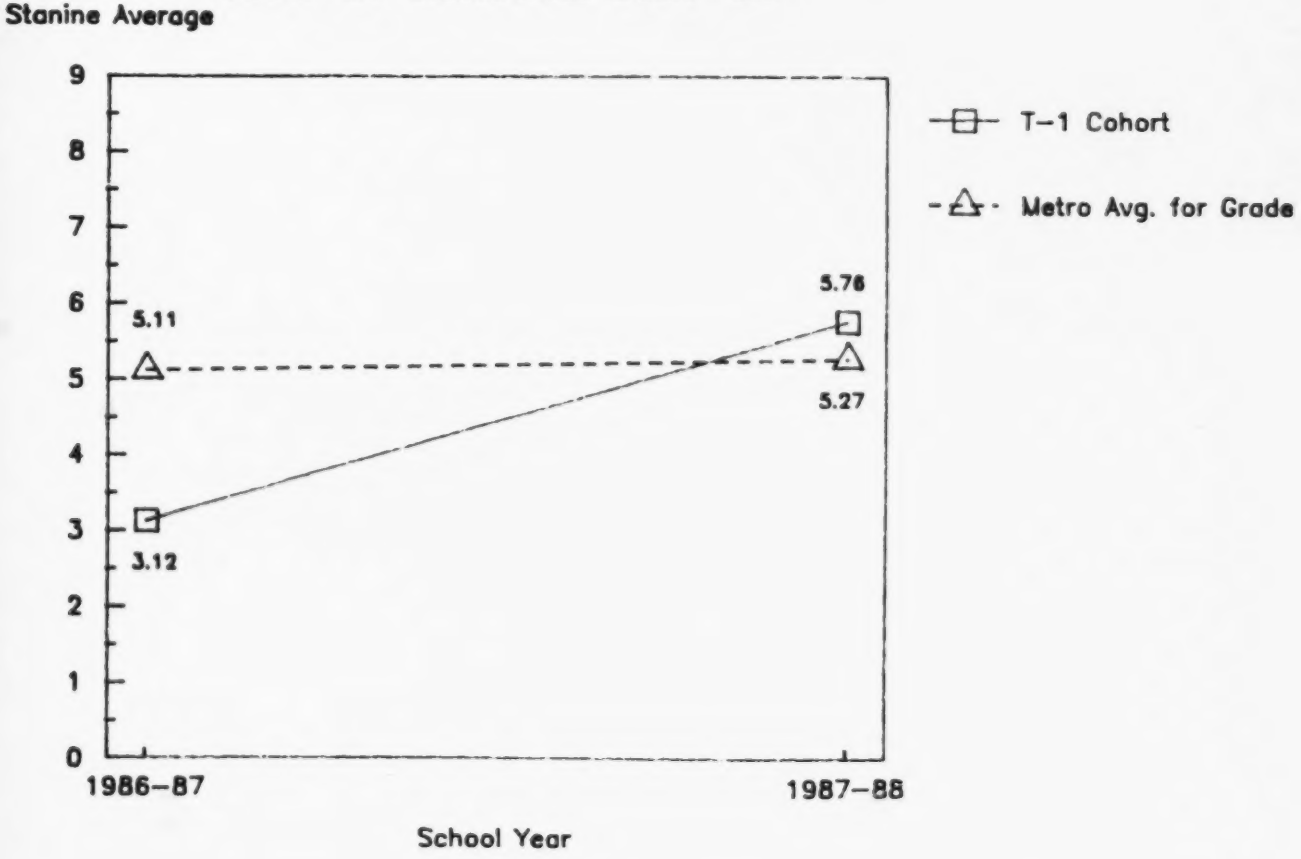
Figures 14 and 15 graphically represents the average stanines for the data shown in Table 17.

FIGURE 14. TOTAL READING MEAN STANINE SCORES 1986-87 THROUGH 1987-88



1C. Transition 1: 1987-88

FIGURE 15. MATH (PART A) MEAN STANINE SCORE 1986-87 THROUGH 1987-88



1C. Transition 1: 1987-88

Table 18 gives the number and percentage of students who improved their performance on Total Reading and Mathematics, Part A from midyear kindergarten (1987) to midyear T-1 (1988).

Table 18
Number and Percentage of Students Who
Improved in Total Reading and Mathematics, Part A
Based on Stanines, 1987 vs. 1988

	Midyear '87 vs. Midyear '88 Kindergarten - Transition 1	
	N	%
TOTAL READING		
Improved	692	92.8%
No Change	44	5.9%
Declined	10	1.3%
	746	100.0%
Wilcoxon Sign Ranks Test	z = -22.81	p = .000
MATH, PART A		
Improved	654	86.6%
No Change	80	10.6%
Declined	21	2.8%
	755	100.0%
Wilcoxon Sign Ranks Test	z = -22.17	p = .000

FIGURE 16. CHANGES IN STANINE CATEGORIES
Total Reading: T–1 Cohort, 1987–88

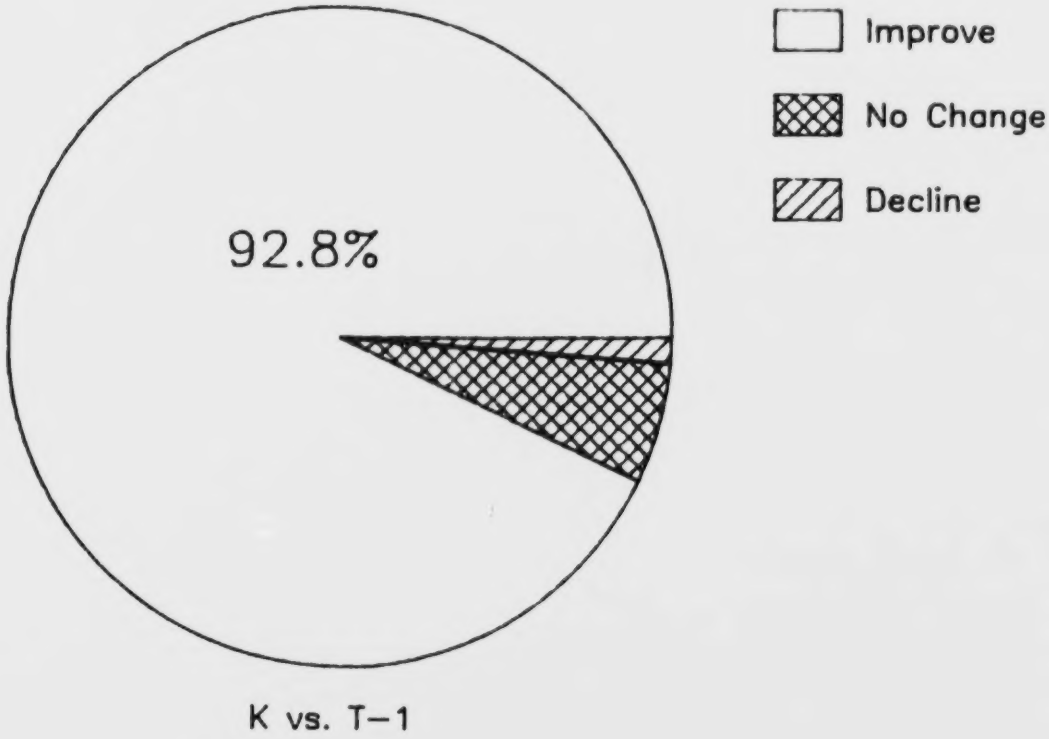
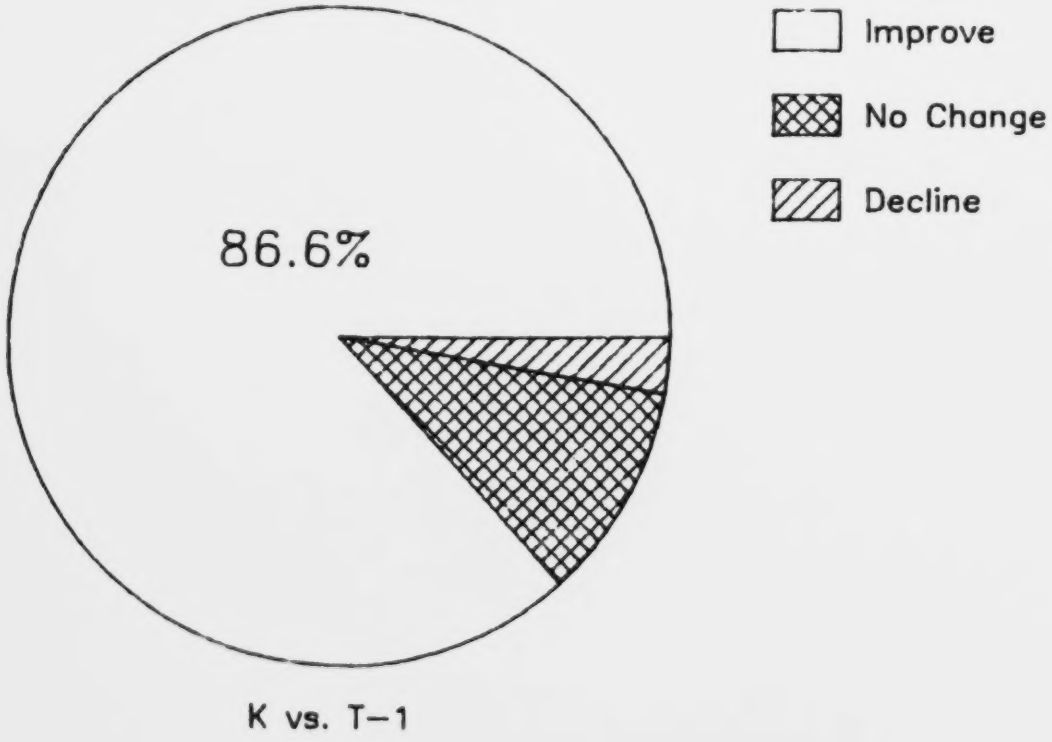


FIGURE 17. CHANGES IN STANINE CATEGORIES SESAT 1 Math (Part A): T–1 Cohort, 1987–88



IC. Transition 1: 1987-88

SECTION 2

Transition-Four (T-4) Program Evaluation

The Transition-Four Program (T-4), implemented for the first time in 1985-86, is an alternative remediation program designed for students in the general education program who have not mastered minimum skill requirements for grades one to three.

The instructional approach for T-4 focuses on the child's own responsibility for learning. The adjusted curriculum insures the expansion of each child's social, emotional, physical and academic development.

T-4 classes have an enrollment limit of 20 students (minimum of 10). These classes receive the same services as regular fourth grade (i.e. physical education, music, art), except for Chapter One services.

Students not eligible for the T-4 program are (a) those who have been identified as having a certifiable handicapping condition and (b) those who have repeated third grade.

Since a major purpose of the T-4 program is to give the child an additional year to master minimum skills, the grade placement to follow T-4 will be regular fourth grade. The overall emphasis of the T-4 program is to provide an alternative curriculum with accompanying materials to remediate basic skills. T-4 is an individualized program with attention given to:

Section 2. Transition 4

1) Mastery of basic skills in communication
2) A manipulative approach to teaching math skills
3) Reinforcement of basic skills through the content of science and social studies
4) Development of process skills in science and social studies

Special efforts are made in the T-4 program to help each child to achieve success and to maintain a healthy attitude toward school and learning.

C1

Subsection 2A

Transition 4: 1985-86 Cohort

The T-4 database for the 1985-86 cohort includes 281 students from 25 schools. Table 19 shows the racial and sex categories for this group of students.

Table 19

Race and Sex Categories in T-4 Cohort of 1985-86

	Number	Percent
Race		
Asian	2	0.7
Black	134	47.7
Hispanic	1	.4
White	144	51.2
Total	281	100.0
Sex		
Female	113	40.2
Male	168	59.8
Total	281	100.0

RESULTS

Evaluation Question 1: What were the attendance rates of the students in the T-4 cohort for the years 1984-85 (grade 3), 1985-86 (T-4), 1986-87 (grade 4), and 1987-88 (grade 5)?

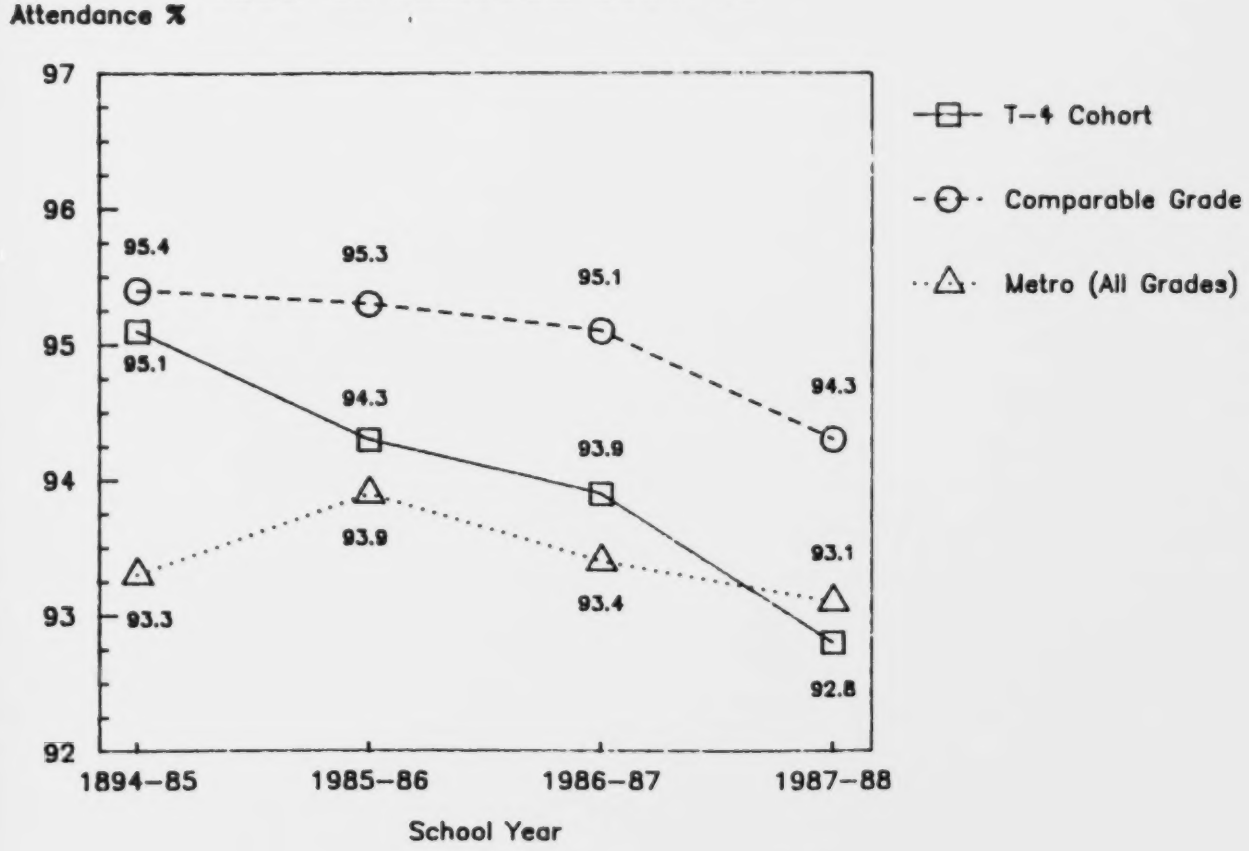
Attendance rates were calculated for each student for the three years in question. Average attendance rates for 1984-85, 1985-86, 1986-87,and 1987-88 were 95.1%, 94.3%, 93.9%, and 92.8% respectively, indicating a slight improvement of attendance for the T-4 year and a slight decline during the fourth grade year. Attendance rates for comparable grades during the three years were 95.4%, 95.3%, 95.1%, and 94.3%. For all students in Metro (K-12) the attendance rates were 93.3%, 93.9%, 93.4%, and 93.1%, respectively. Attendance data for the three years are shown in Table 20. A graphic representation is presented in Figure 18.

Table 20

Attendance Rates for 1984-85 through 1987-88

	1984-85 Grade 3	1985-86 T-4	1986-87 Grade 4	1987-88 Grade 5
T-4 Cohort	95.1%	94.3%	93.9%	92.8%
Comparable Grade	95.4%	95.3%	95.1%	94.3%
Metro (K-12)	93.3%	93.9%	93.4%	93.1%

FIGURE 18. PERCENTAGE ATTENDANCE RATES 1984-85 THROUGH 1987-88



2A. Transition 4: 1985-86

Evaluation Question 2: How much improvement did T-4 students make on norm referenced tests--Spring 1984 (2nd grade, CAT-12), Midyear 1987 (4th grade, Stanford Intermediate 1), and Spring 1988 (5th grade, Stanford Intermediate 2)?

Table 21

Number and Percentage of Students Scoring at Each Stanine Level of California Achievement Test (CAT-12) Spring 1984 (Grade 2), Stanford Intermediate 1 Midyear 1987 (Grade 4), and Stanford Intermediate 2 Spring 1988 (Grade 5) in Total Reading

STANINE	TOTAL READING					
	Spring '84 CAT-12 Grade 2		Midyear '87 SAT Int. 1 Grade 4		Spring '88 SAT Int. 2 Grade 5	
	No.	(%)	No.	(%)	No.	(%)
Low						
1	15	(6.1)	1	(0.5)	4	(2.2)
2	24	(9.8)	14	(6.3)	11	(5.9)
3	70	(28.7)	49	(22.1)	47	(25.4)
	109	(44.6)	64	(28.9)	62	(33.5)
Average						
4	73	(30.0)	79	(35.5)	57	(30.8)
5	52	(21.3)	53	(23.9)	45	(24.3)
6	10	(4.1)	22	(9.9)	11	(5.9)
	135	(55.4)	154	(69.3)	113	(61.0)
High						
7	0	(0.0)	4	(1.8)	8	(4.3)
8	0	(0.0)	0	(0.0)	2	(1.1)
9	0	(0.0)	0	(0.0)	0	(0.0)
	0	(0.0)	4	(1.8)	10	(5.4)
TOTAL	244	(100%)	222	(100%)	185	(100%)

Table 22

Number and Percentage of Students
Scoring at Each Stanine Level of
California Achievement Test (CAT-12) Spring 1984 (Grade 2),
Stanford Intermediate 1 Midyear 1987 (Grade 4), and
Stanford Intermediate 2 Spring 1988 (Grade 5) in
Total Mathematics

STANINE	TOTAL MATHEMATICS					
	Spring '84 CAT-12 Grade 2		Midyear '87 SAT Int. 1 Grade 4		Spring '88 SAT Int. 2 Grade 5	
	No.	(%)	No.	(%)	No.	(%)
Low						
1	7	(2.9)	1	(0.5)	1	(0.5)
2	22	(9.0)	12	(5.5)	3	(1.6)
3	47	(19.2)	27	(12.3)	31	(16.9)
	76	(31.1)	40	(18.3)	35	(19.0)
Average						
4	52	(21.2)	72	(32.8)	59	(32.2)
5	72	(29.3)	61	(27.8)	50	(27.3)
6	34	(13.9)	35	(16.0)	24	(13.1)
	158	(64.4)	168	(76.6)	133	(72.6)
High						
7	11	(4.5)	9	(4.1)	8	(4.4)
8	0	(0.0)	1	(0.5)	6	(3.3)
9	0	(0.0)	1	(0.5)	1	(0.5)
	11	(4.5)	11	(5.1)	15	(8.2)
TOTAL	245	(100%)	222	(100%)	183	(100%)

2A. Transition 4: 1985-86

Table 23

Averages and Standard Deviations for
Reading and Mathematics Scores
for CAT-12 (Spring 1984),
Stanford Intermediate 1 (Midyear 1987)
Stanford Intermediate 2 (Spring 1988)

	TOTAL READING			TOTAL MATHEMATICS		
	Spr.'84	Midyr.'87	Spr. '88	Spr.'84	Midyr.'87	Spr.'88
Number T-4 Students	244	222	185	245	219	183
Stanines						
Metro Average	5.25	5.21	5.35	5.72	5.32	5.76
T-4 Average	3.63	4.13	4.10	4.25	4.52	4.61
Standard Deviation	1.22	1.14	1.32	1.42	1.27	1.33
Normal Curve Equivalent Scores (NCE)						
Average NCE	34.40	40.68	40.23	42.04	44.47	45.44
%ile Rank of NCE Average	23	33	32	35	40	41
Standard Deviation (NCE)	13.23	11.73	13.38	14.66	12.76	13.81

FIGURE 19. TOTAL READING MEAN STANINE SCORES 1983–84, 1986–87, 1987–88

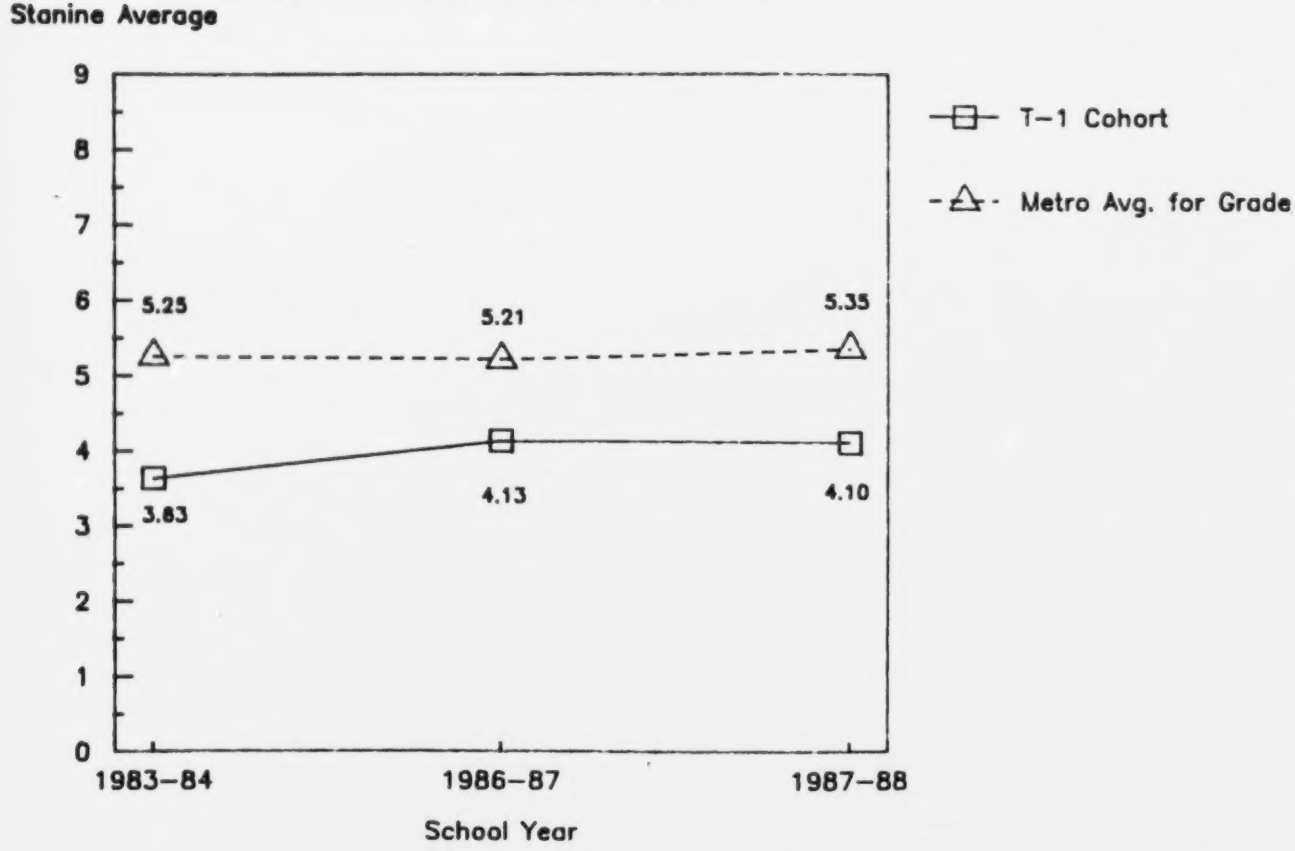


FIGURE 20. TOTAL MATH MEAN STANINE SCORES 1983-84, 1986-87, 1987-88

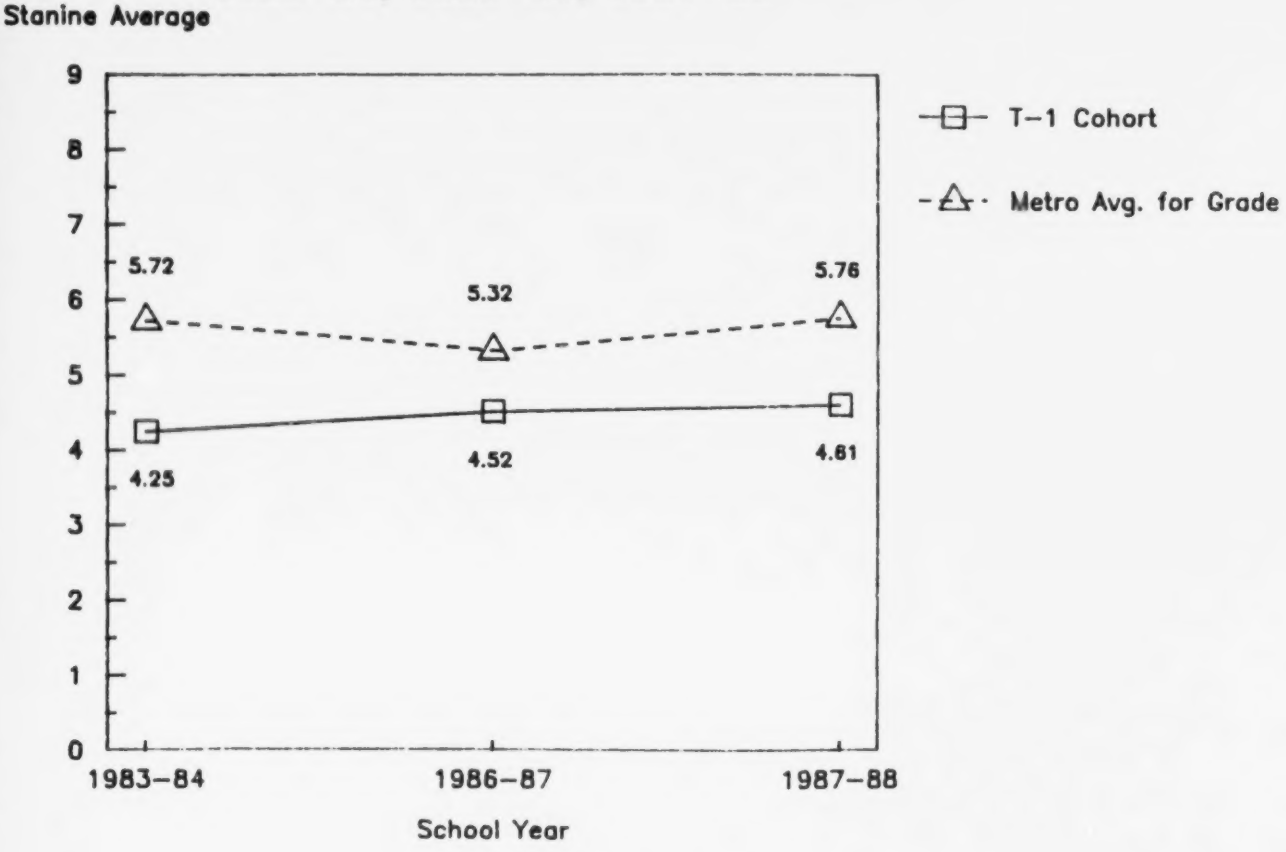
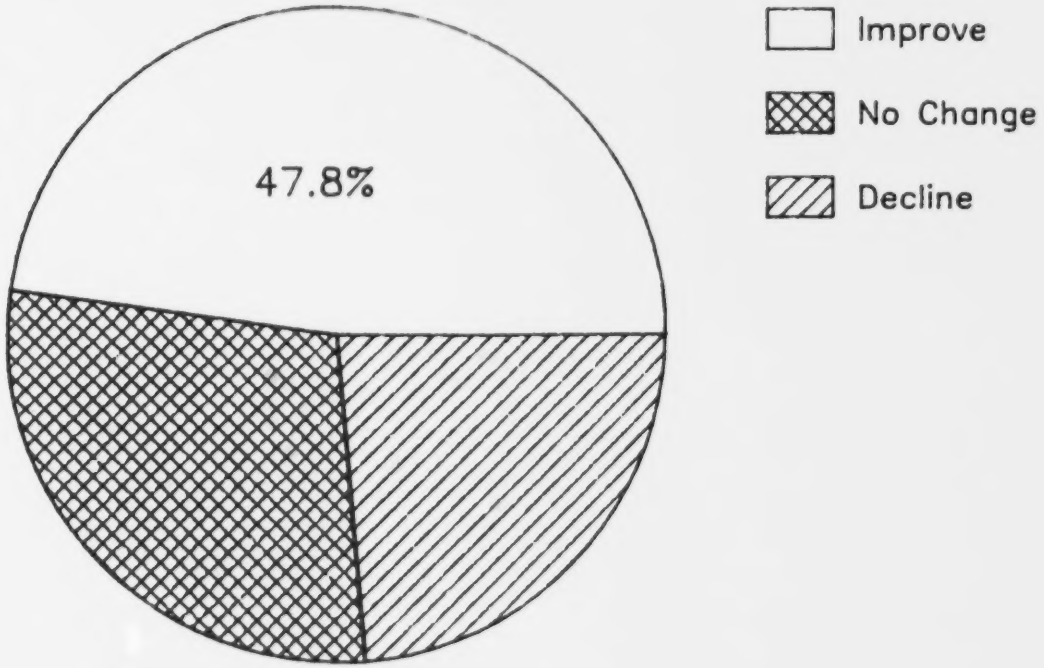


Table 24

Number and Percentage of T-4 Students Who Improved, Made No Change, or Performed Worse Based on Stanines for CAT-12 (Spring 1984) and Stanford Intermediate 2 (Spring 1988) in Reading and Mathematics

	Stanine Change from Spring 1984 to Spring 1988	
	Number	Percent
READING		
Improved	77	47.8%
No Change	46	28.6%
Declined	38	23.6%
Total	161	100%
Wilcoxon Sign Ranks Test	z = -3.67	p = .0002
MATHEMATICS		
Improved	69	43.4%
No Change	48	30.2%
Declined	42	26.4%
Total	159	100%
Wilcoxon Sign Ranks Test	z = -2.46	p = 0.0138

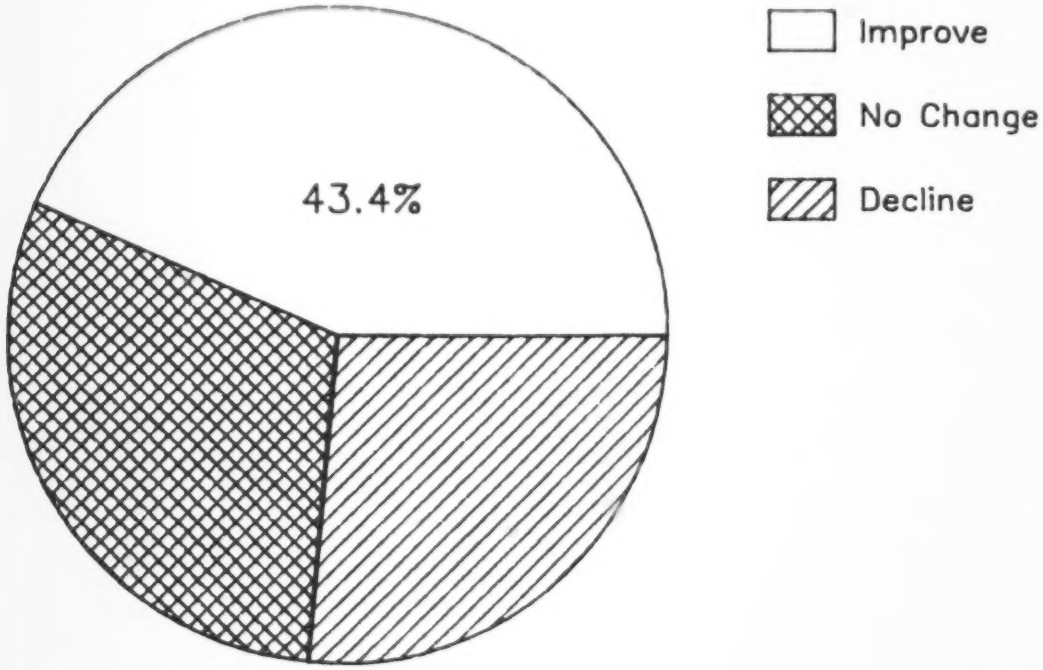
FIGURE 21. CHANGES IN STANINE CATEGORIES
Total Reading : T–4 Cohort, 1985–86



Grade 2 vs. Grade 5

2A. Transition 4: 1985-86

FIGURE 22. CHANGES IN STANINE CATEGORIES
Total Mathematics: T–4 Cohort, 1985–86



Grade 2 vs. Grade 5

Subsection 2B

Transition 4: 1986-87 Cohort

The T-4 database for the 1986-87 cohort included 299 students from 25 schools. Table 25 shows racial and sex categories for these students.

Table 25

Race and Sex Categories in T-4 Cohort of 1986-87

	Number	Percent
Race		
Asian	2	0.7
Black	167	55.9
White	130	43.5
Total	299	100.0
Sex		
Female	135	45.2
Male	164	54.8
Total	299	100.0

RESULTS

Evaluation Question 1: What were the attendance rates of the students in the T-4 cohort for the years 1985-86 (grade three), 1986-87 (T-4), and 1987-88 (grade 4)?

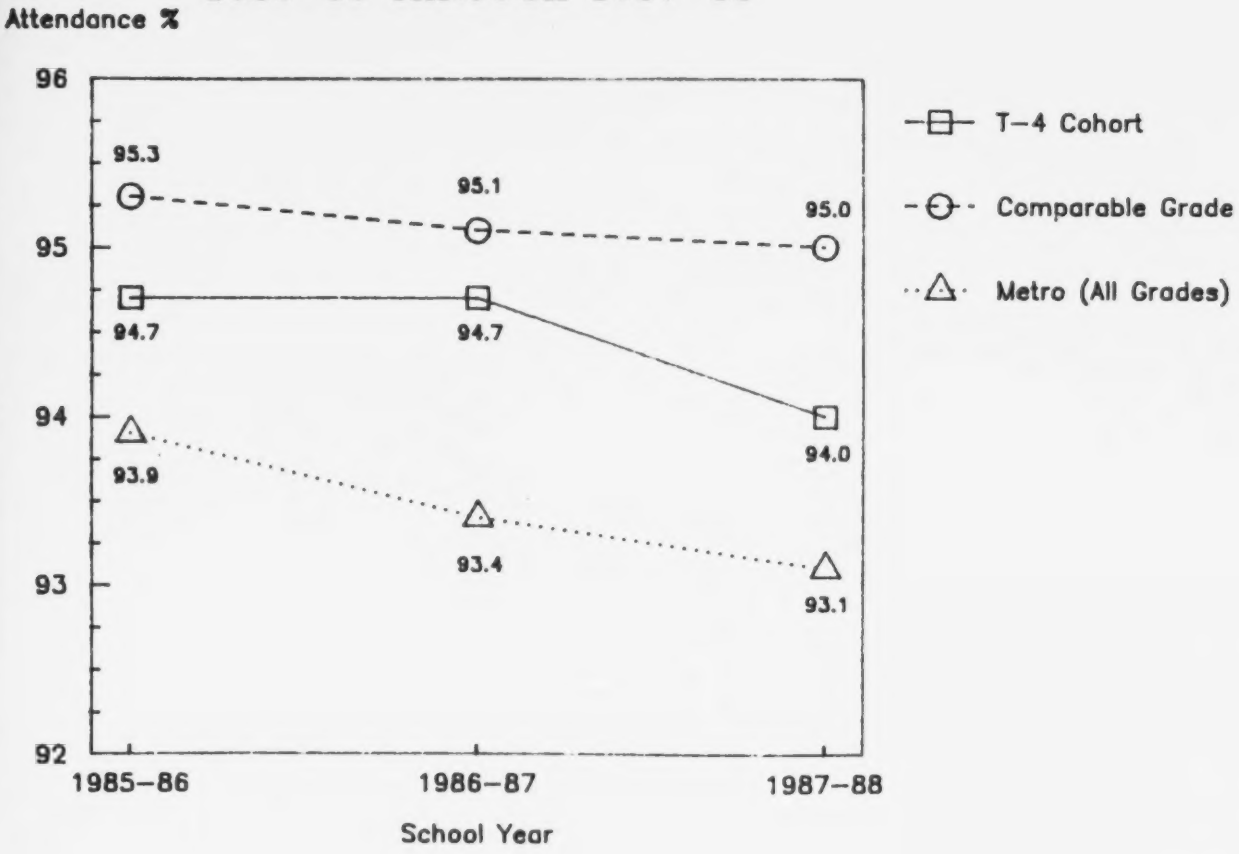
Attendance rates were calculated for each student for the three years in question. Average attendance rates for 1985-86, 1986-87, and 1987-88 were 94.7%, 94.7%, and 94.0% respectively. Attendance rates for comparable grades during the three years were 95.3%, 95.1%, and 95.0%. For all students in Metro the attendance rates were 93.9%, 93.4%, and 93.1%, respectively. Attendance data for the three years are shown in Table 26. A graphic representation is presented in Figure 23 .

Table 26

Attendance Rates for 1985-86 through 1987-88

	1985-86 Grade 3	1986-87 T-4	1987-88 Grade 4
T-4 Cohort	94.7%	94.7%	94.0%
Comparable Grade	95.3%	95.1%	95.0%
Metro (All Grades)	93.9%	93.4%	93.1%

FIGURE 23. PERCENTAGE ATTENDANCE RATES 1985-86 THROUGH 1987-88



2B. Transition 4. 1986-87

TRANSITION EVALUATION

Evaluation Question 2: How much improvement did T-4 students make on norm referenced tests: spring 1985 (second grade, Stanford Achievement Test, Primary 2), midyear 1987 (T-4, Stanford Primary 3), and midyear 1988 (grade 4, Stanford Intermediate 1) ?

Table 27
Number and Percentage of Students Scoring at Each Stanine Level of Stanford Primary 2 for Spring 1985, Stanford Primary 3 for Midyear 1987 and Stanford Intermediate 1 for Midyear 1988 in Total Reading

STANINE	TOTAL READING					
	Spring '85 SAT Prim. 2 Grade 2		Midyear '87 SAT Prim. 3 T-4		Midyear '88 SAT Int. 2 Grade 5	
	No.	(%)	No.	(%)	No.	(%)
Low						
1	5	(2.7)	2	(0.7)	3	(1.0)
2	38	(20.4)	10	(3.6)	22	(17.6)
3	86	(46.2)	54	(19.2)	51	(17.7)
	129	(69.3)	66	(23.5)	76	(26.3)
Average						
4	47	(25.3)	66	(23.5)	111	(38.5)
5	8	(4.3)	87	(31.0)	63	(21.9)
6	2	(0.7)	40	(14.2)	29	(10.1)
	57	(30.7)	193	(68.7)	203	(70.5)
High						
7	0	(0.0)	14	(5.0)	9	(3.1)
8	0	(0.0)	7	(2.5)	0	(0.0)
9	0	(0.0)	1	(0.4)	0	(0.0)
	0	(0.0)	22	(7.9)	9	(3.1)
TOTAL	186	(100%)	281	(100%)	288	(100%)

Table 28

Number and Percentage of Students
Scoring at Each Stanine Level of
Stanford Primary 2 for Spring 1985 and
Stanford Primary 3 for Midyear 1987
Stanford Intermediate 1 for Midyear 1988
in Total Mathematics

STANINE	TOTAL MATHEMATICS					
	Spring '85 SAT Prim. 2 Grade 2		Midyear '87 SAT Prim. 3 T-4		Midyear '88 SAT Int. 2 Grade 5	
	No.	(%)	No.	(%)	No.	(%)
Low						
1	19	(10.2)	1	(0.4)	2	(0.7)
2	41	(22.2)	8	(2.9)	16	(5.6)
3	46	(24.7)	27	(9.9)	42	(14.7)
	106	(56.9)	36	(13.2)	60	(21.0)
Average						
4	63	(33.9)	63	(23.0)	64	(22.4)
5	15	(8.1)	72	(26.3)	89	(31.1)
6	1	(0.5)	61	(22.3)	55	(19.2)
	79	(42.5)	196	(71.6)	208	(72.7)
High						
7	1	(0.5)	29	(10.6)	14	(4.9)
8	0	(0.0)	12	(4.4)	4	(1.4)
9	0	(0.0)	1	(0.4)	0	(0.0)
	1	(0.5)	42	(15.4)	18	(6.3)
TOTAL	186	(100%)	274	(100%)	286	(100%)

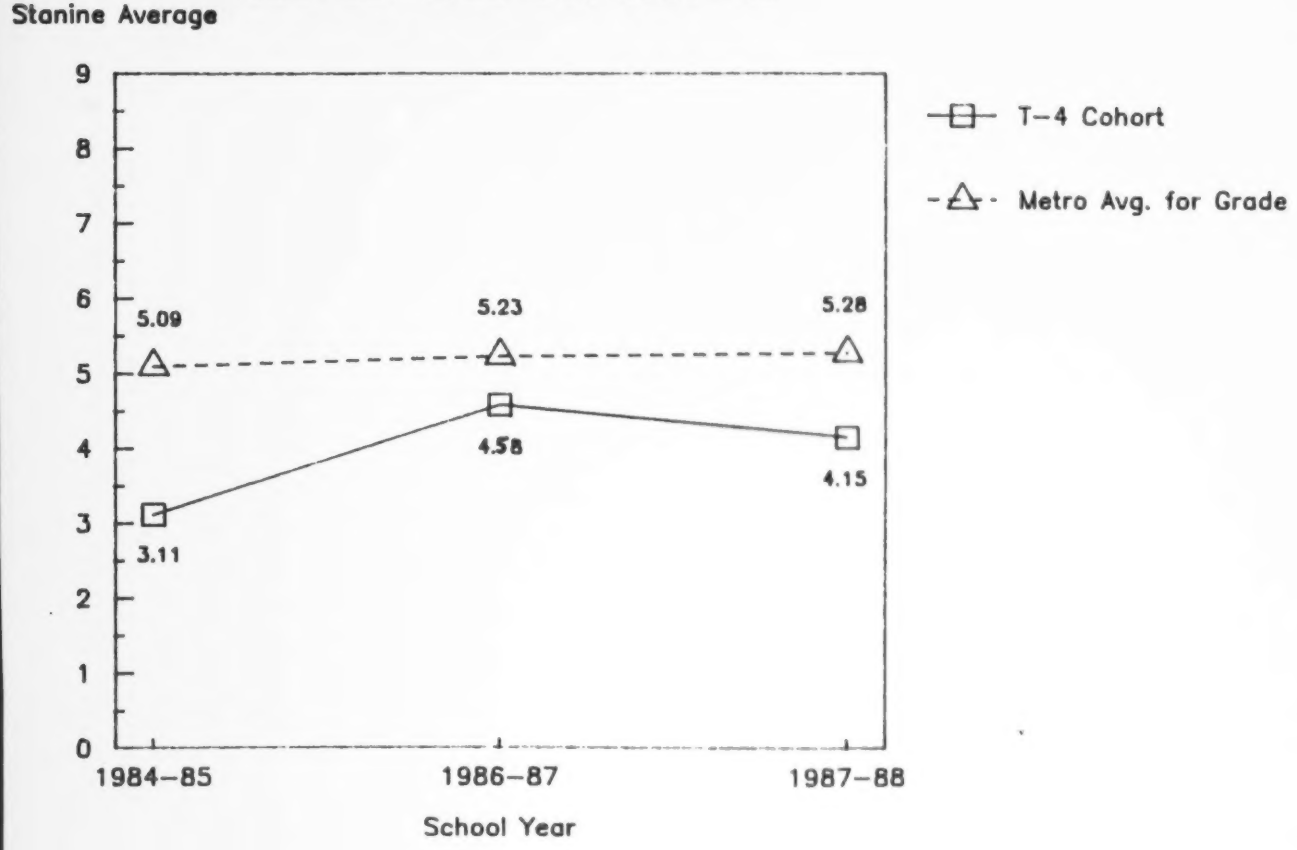
TRANSITION EVALUATION

Table 29

Averages and Standard Deviations for
Reading and Mathematics Scores
for Stanford Primary 2 (Spring 1985) and
Stanford Primary 3 (Midyear 1987)
Stanford Intermediate 1 (Midyear 1988)

	TOTAL READING			TOTAL MATHEMATICS		
	Spr.'85	Mid.'87	Mid. '88	Spr.'85	Mid.'87	Mid. '88
Number of T-4 Students	186	281	288	186	274	286
Stanines						
Metro Average	5.09	5.23	5.28	5.47	5.29	5.35
T-4 Average	3.11	4.58	4.15	3.11	5.05	4.62
Standard Deviation	0.91	1.37	1.21	1.19	1.43	1.34
Normal Curve Equivalent Scores (NCE)						
NCE Average	30.32	45.08	40.91	30.18	50.23	45.47
%ile Rank of NCE Average	18	41	33	17	50	41
Standard Deviation (NCE)	8.82	13.57	12.21	11.93	14.09	13.45

FIGURE 24. TOTAL READING MEAN STANINE SCORES 1984-85, 1986-87, 1987-88



2B. Transition 4. 1986-87

FIGURE 25. TOTAL MATH MEAN STANINE SCORES 1984–85, 1986–87, 1987–88

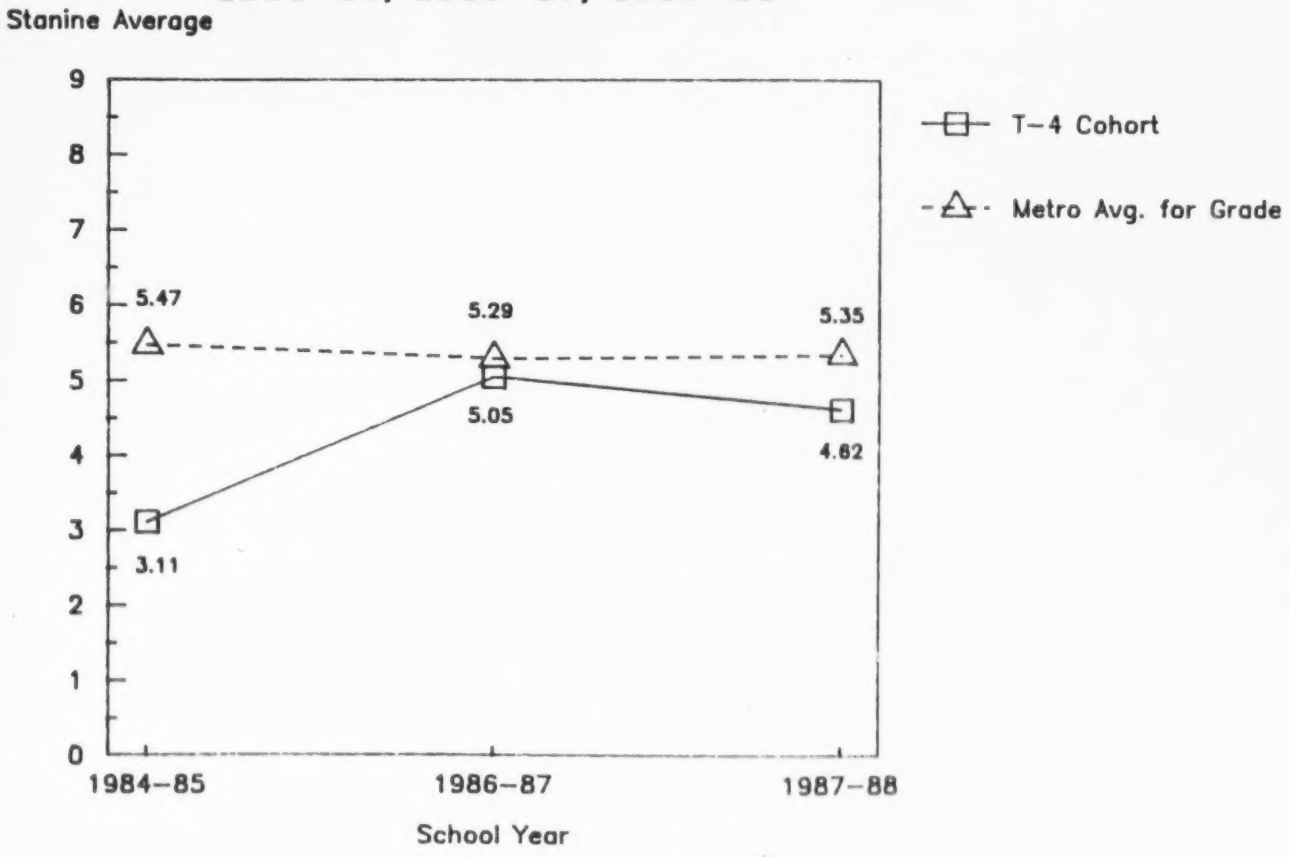
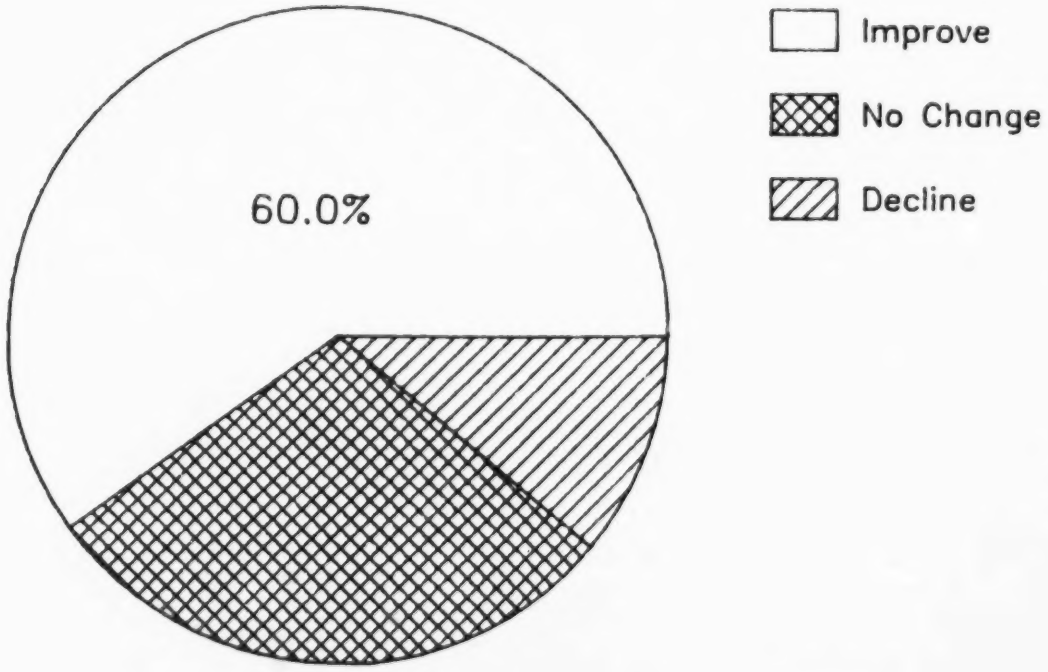


Table 30

Number and Percentage of T-4 Students Who Improved, Made No Change, or Performed Worse Based on Stanines for Grade 2 Stanford Primary 2 (Spring 1985) and Grade 4 Stanford Intermediate 1 (Midyear 1988) in Reading and Mathematics

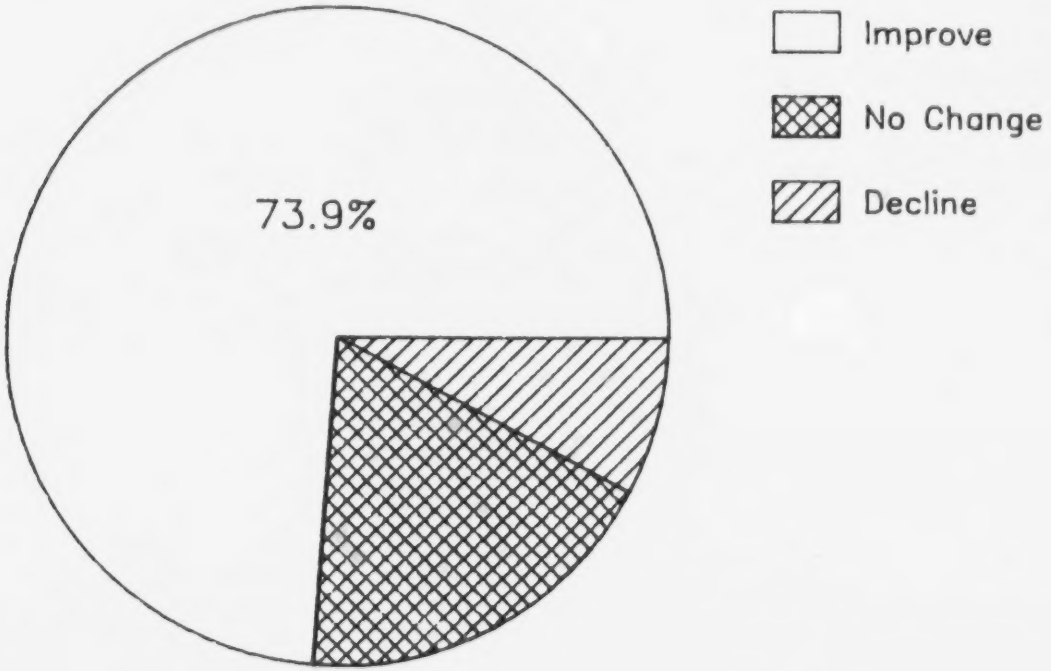
	Stanine Change from Spring 1985 to Midyear 1988		
		Number	Percent
READING			
	Improved	108	60.0
	No Change	52	28.9
	Declined	20	11.1
	Total	180	100.0
	Wilcoxon Sign Ranks Test	z = -7.61	p = .0000
MATHEMATICS			
	Improved	133	73.9
	No Change	33	18.3
	Declined	14	7.8
	Total	180	100.0
	Wilcoxon Sign Ranks Test	z = -9.08	p = .0000

FIGURE 26: CHANGES IN STANINE CATEGORIES
Total Reading: T–4 Cohort, 1986–87



Grade 2 vs. Grade 4

FIGURE 27. CHANGES IN STANINE CATEGORIES
Total Mathematics: T–4 Cohort, 1986–87



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2B. Transition 4. 1986-87

Subsection 2C

Transition 4: 1987-88 Cohort

The T-4 database for the 1987-88 cohort includes 412 students from 28 schools.

Table 31

Race and Sex Categories in T-4 Cohort of 1987-88

	Number	Percent
Race		
Asian	6	1.6
Black	182	49.2
Hispanic	1	0.3
Am. Indian	1	0.3
White	180	48.6
Total	370	100.0
Sex		
Female	173	46.8
Male	197	53.2
Total	370	100.0

2C. Transition 4: 1987-88

RESULTS

Evaluation Question 1: What were the attendance rates of the students in the T-4 cohort for the years 1986-87 (grade three) and 1987-88 (T-4)?

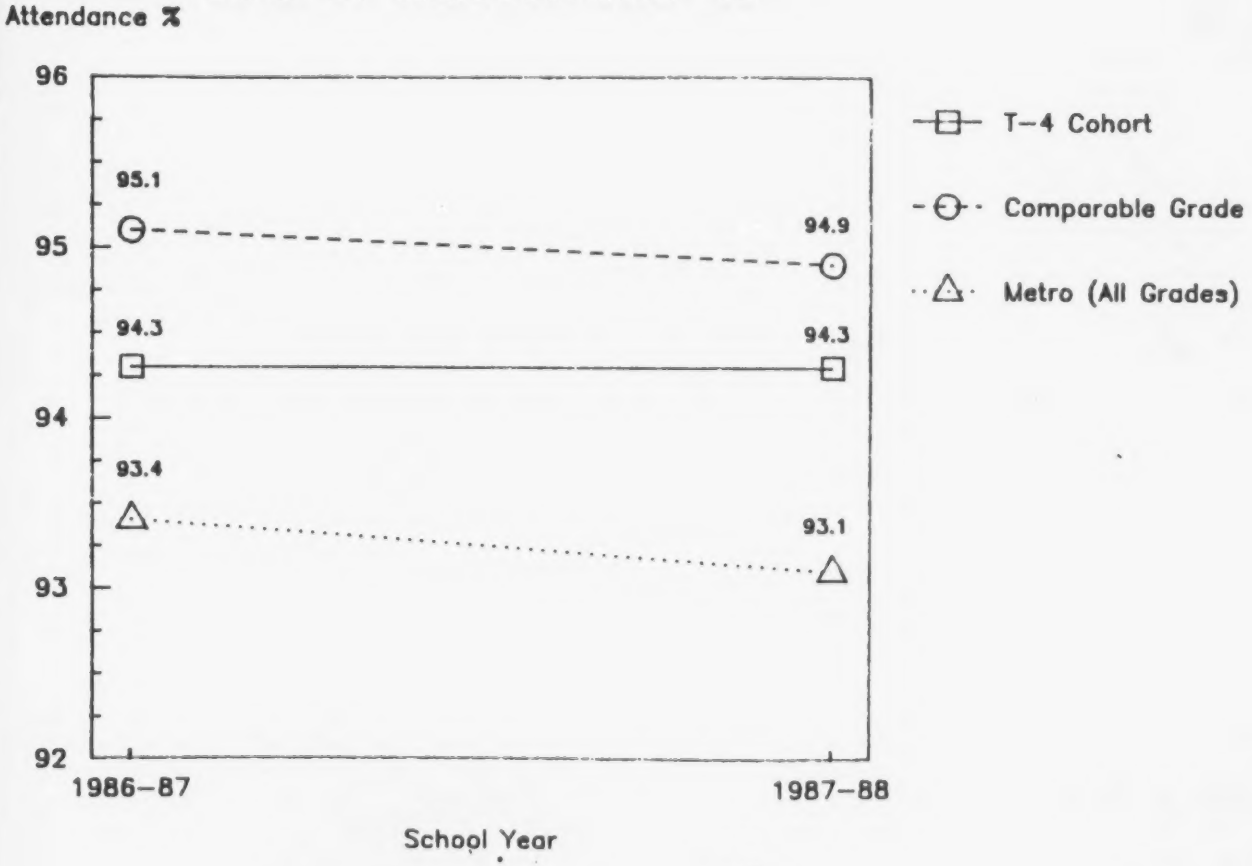
Attendance rates were calculated for each student in the T-4 cohort for the two years in question. Average attendance rates for 1986-87 and 1987-88 were 94.3% and 94.3%, respectively. Attendance rates for comparable grades during the two years were 95.1% and 94.9%. For all students (grades K-12) in Metro the attendance rates were 93.4% and 93.1%, respectively. Attendance data for the two years are shown in Table 32. A graphic representation is presented in Figure 28.

Table 32

Attendance Rates for 1985-86 through 1987-88

	1986-87 Grade 3	1987-88 T-4
T-4 Cohort	94.3%	94.3%
Comparable Grade	95.1%	94.9%
Metro (All Grades)	93.4%	93.1%

FIGURE 28. PERCENTAGE ATTENDANCE RATES 1986-87 THROUGH 1987-88



2C. Transition 4: 1987-88

Evaluation Question 2: How much improvement did T-4 students make on the Basic Skills First Achievement Test (BSFAT) from spring 1987 (3rd Grade) to spring 1988 (T-4)?

Scores on the BSFAT are presented as a "Percentage of Objectives Mastered." Mastery of an objective is defined as correctly answering at least three of the four items in that objective. There are eight Reading objectives and seventeen Mathematics objectives on the third grade BSFAT. Table 33 gives the average Percentage of Objectives Mastered for Metro (3rd Grade) and for T-4 students for spring 1987 and spring 1988.

Table 33

Average Percentage of Objectives Mastered on the BSFAT for Metro 3rd Graders and T-4 Students Spring 1987 and Spring 1988

	Spring 1987		Spring 1988		GAIN	
	Reading	Math	Reading	Math	Reading	Math
Metro - Grade 3	75.1	76.7	76.6	78.5	1.5	1.8
T-4	48.7*	53.0*	75.0	79.7	26.3	26.7

*T-4 students when in third grade

FIGURE 29

Average % Objectives Mastered on BSFAT Reading 1986-87 Through 1987-88

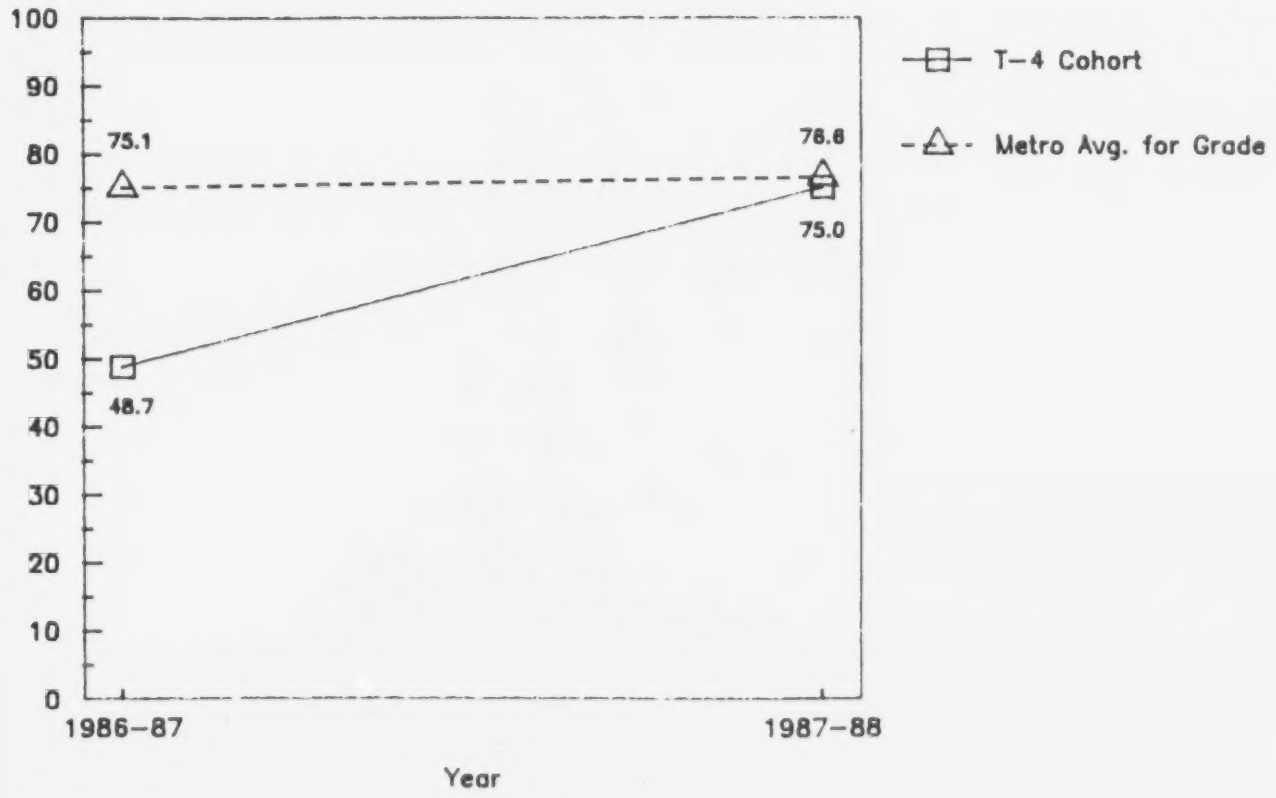
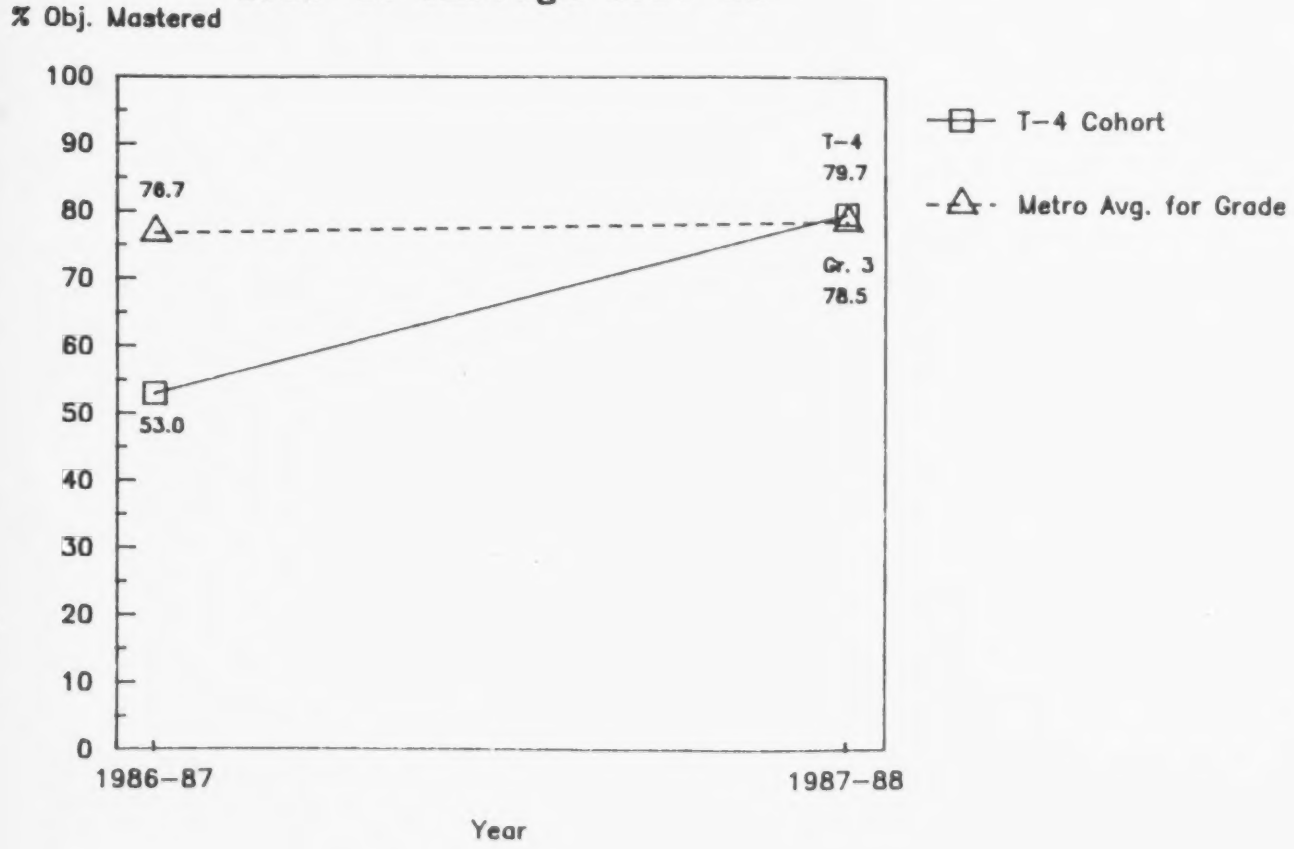


FIG 30. Avg. % Objectives Mastered on BSFAT Math 1986-87 Through 1987-88



2C. Transition 4: 1987-88

TRANSITION EVALUATION

Another way to look at the progress of T-4 students on the BSFAT is to examine how much "ground" each child gained or lost from spring 1987 to spring 1988. Table 34 shows that on Reading almost 83% of the students made progress and that on Mathematics 92.1% moved up during the T-4 year.

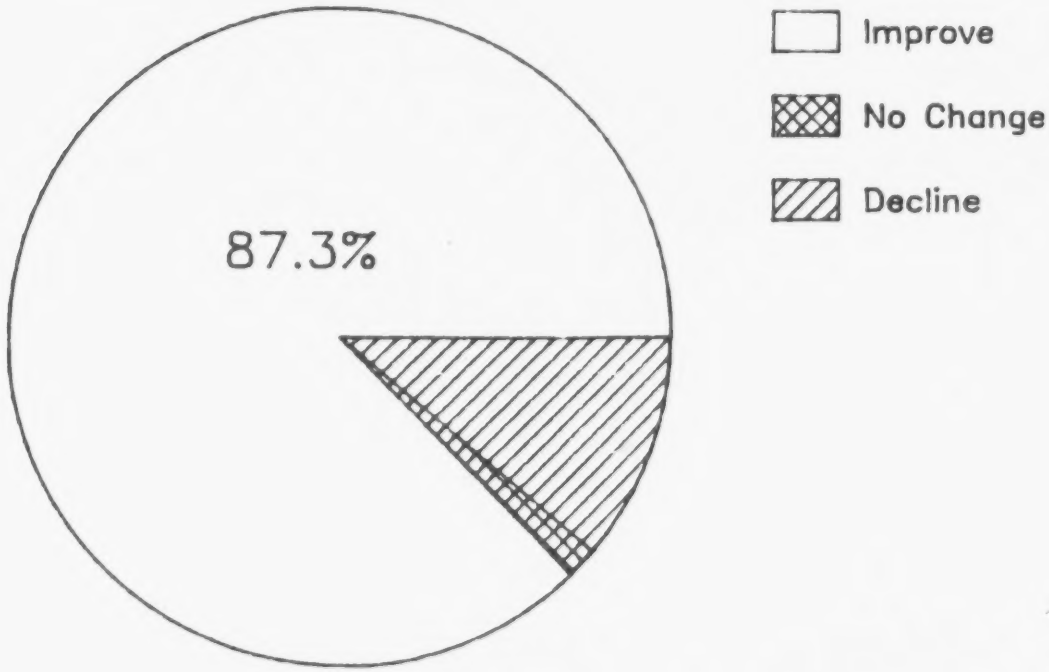
Table 34

Number and Percentage of T-4 Students Who Improved, Made No Change or Who Performed Worse on the BSFAT from Spring 1987 to Spring 1988 in Reading and Mathematics, Percentage of Objectives Mastered

BSFAT Results from Spring 1987 to Spring 1988

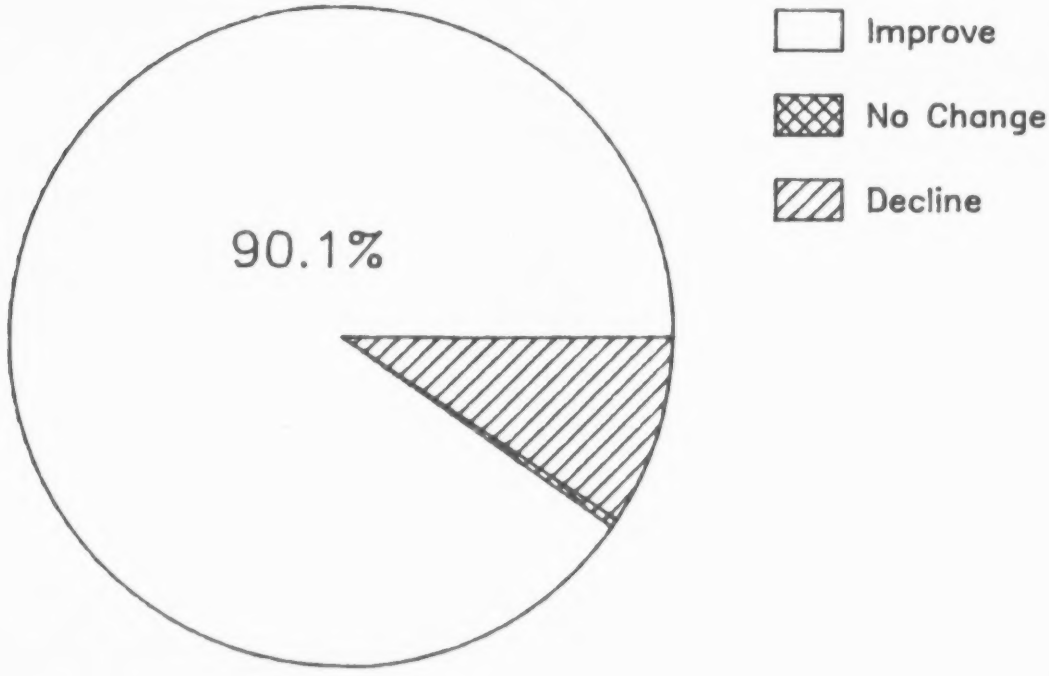
	Number	Percent
READING		
Improved	178	87.3%
No Change	3	1.5%
Declined	23	11.3%
Total	204	100%
Wilcoxon Sign Ranks Test	z = -10.79	p = .0000
MATHEMATICS		
Improved	201	90.1%
No Change	1	0.4%
Declined	21	9.4%
Total	223	100%
Wilcoxon Sign Ranks Test	z = -11.68	p = .0000

FIGURE 31. CHANGES IN % OBJECTIVES MASTERED
BSFAT Reading: T–4 Cohort, 1987–88



Grade 3 vs. T–4

FIGURE 32. CHANGES IN % OBJECTIVES MASTERED
BSFAT Mathematics: T–4 Cohort, 1987–88



Grade 3 vs. T–4

2C. Transition 4: 1987-88

Further analysis (Table 35) shows the number and percentage of T-4 students who scored at or below 50% of objectives mastered and conversely those who scored above 50% of objectives mastered on the BSFAT for spring 1987 (third grade) and spring 1988 (T-4). Table 35 also gives the number and percentage of T-4 students who scored at or above 75% of objectives mastered for spring 1987 (as 3rd graders) and spring 1988 (T-4). This would indicate the increasing readiness of T-4 students for fourth grade basic skills instruction.

Table 35

Number and Percentage of T-4 Students Scoring At or Below 50%, Above 50%, and At or Above 75% of Objectives Mastered on the Basic Skills First Achievement Test (BSFAT)

	OBJECTIVES MASTERED					
	At or Below 50%		Above 50%		At or Above 75%	
	Number	%	Number	%	Number	%
READING						
Spring 1987 as 3rd Graders	180	61.0	115	39.0	73	24.7
Spring 1988 as T-4	48	19.1	203	80.9	157	62.5
MATHEMATICS						
Spring 1987 as 3rd Graders	139	43.8	178	56.2	67	21.1
Spring 1988 as T-4	30	11.8	225	88.2	171	67.1

TRANSITION EVALUATION

Evaluation Question 3: How much improvement did T-4 students make on norm referenced tests: spring 1986 (second grade, Stanford Achievement Test, Primary 2) vs. midyear 1988 (T-4, Stanford Primary 3)?

Table 36

Number and Percentage of Students Scoring at Each Stanine Level of Stanford Primary 2 for Spring 1986 and Stanford Primary 3 for Midyear 1988 in Total Reading

STANINE	TOTAL READING			
	Spring '86 SAT Prim. 2 Grade 2		Midyear '88 SAT Prim. 3 T-4	
	No.	(%)	No.	(%)
Low				
1	0	(0.0)	1	(0.3)
2	21	(7.4)	8	(2.5)
3	94	(33.2)	47	(14.9)
	115	(40.6)	56	(17.7)
Average				
4	112	(39.6)	99	(31.3)
5	37	(13.1)	77	(24.4)
6	14	(4.9)	56	(17.7)
	163	(57.6)	232	(73.4)
High				
7	4	(1.4)	23	(7.3)
8	0	(0.0)	3	(0.9)
9	1	(0.3)	2	(0.6)
	5	(1.7)	28	(8.8)
TOTAL	283	(100%)	316	(100%)

Table 37

Number and Percentage of Students Scoring at Each Stanine Level of Stanford Primary 2 for Spring 1986 and Stanford Primary 3 for Midyear 1988 in Total Mathematics

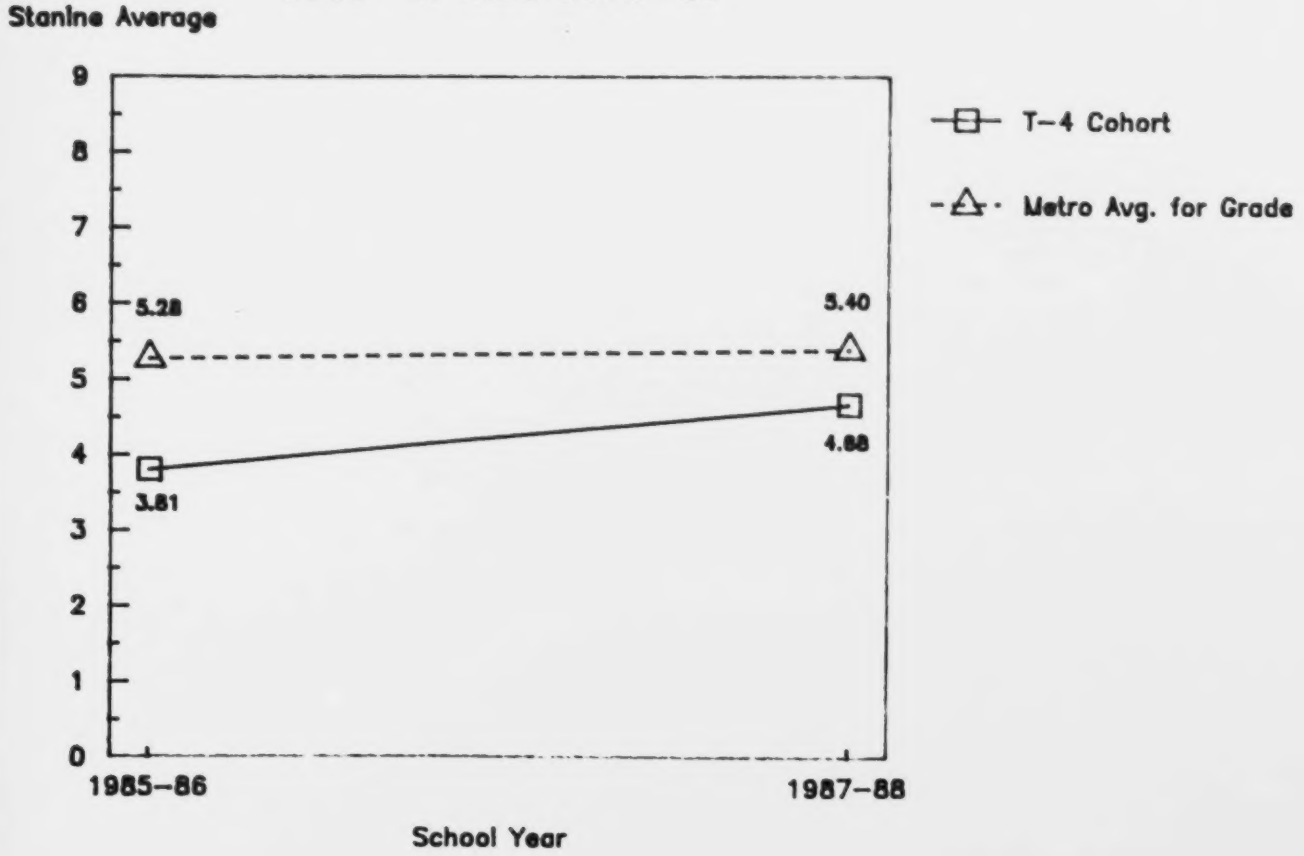
STANINE	TOTAL MATHEMATICS			
	Spring '86 SAT Prim. 2 Grade 2		Midyear '88 SAT Prim. 3 T-4	
	No.	(%)	No.	(%)
Low				
1	6	(1.6)	0	(0.0)
2	28	(9.9)	5	(1.6)
3	35	(12.3)	27	(8.7)
	69	(23.8)	32	(10.3)
Average				
4	100	(35.2)	58	(18.7)
5	67	(23.6)	96	(31.0)
6	30	(10.6)	57	(18.4)
	197	(69.4)	211	(68.1)
High				
7	12	(4.2)	43	(13.9)
8	5	(1.8)	18	(5.8)
9	1	(0.4)	6	(1.9)
	18	(6.4)	67	(21.6)
TOTAL	284	(100%)	310	(100%)

Table 38

Averages and Standard Deviations for
Reading and Mathematics Scores
for Stanford Primary 2 (Spring 1986) and
Stanford Primary 3 (Midyear 1988)

	TOTAL READING		MATHEMATICS	
	Spr.'86	Mid.'88	Spr.'86	Mid.'88
Number of T-4 Students	283	316	284	310
Stanines				
Metro Average	5.28	5.40	5.74	5.60
T-4 Average	3.81	4.68	4.28	5.30
Standard Deviation	1.07	1.32	1.43	1.47
Normal Curve Equivalent Scores (NCE)				
NCE Average	37.51	46.23	41.86	52.88
%ile Rank of NCE Average	28	43	35	55
Standard Deviation (NCE)	10.69	12.96	14.64	14.98

FIGURE 33. TOTAL READING MEAN STANINE SCORES 1985–86 and 1987–88



2C. Transition 4: 1987–88

FIGURE 34. TOTAL MATHEMATICS MEAN STANINE SCORES 1985–86 and 1987–88

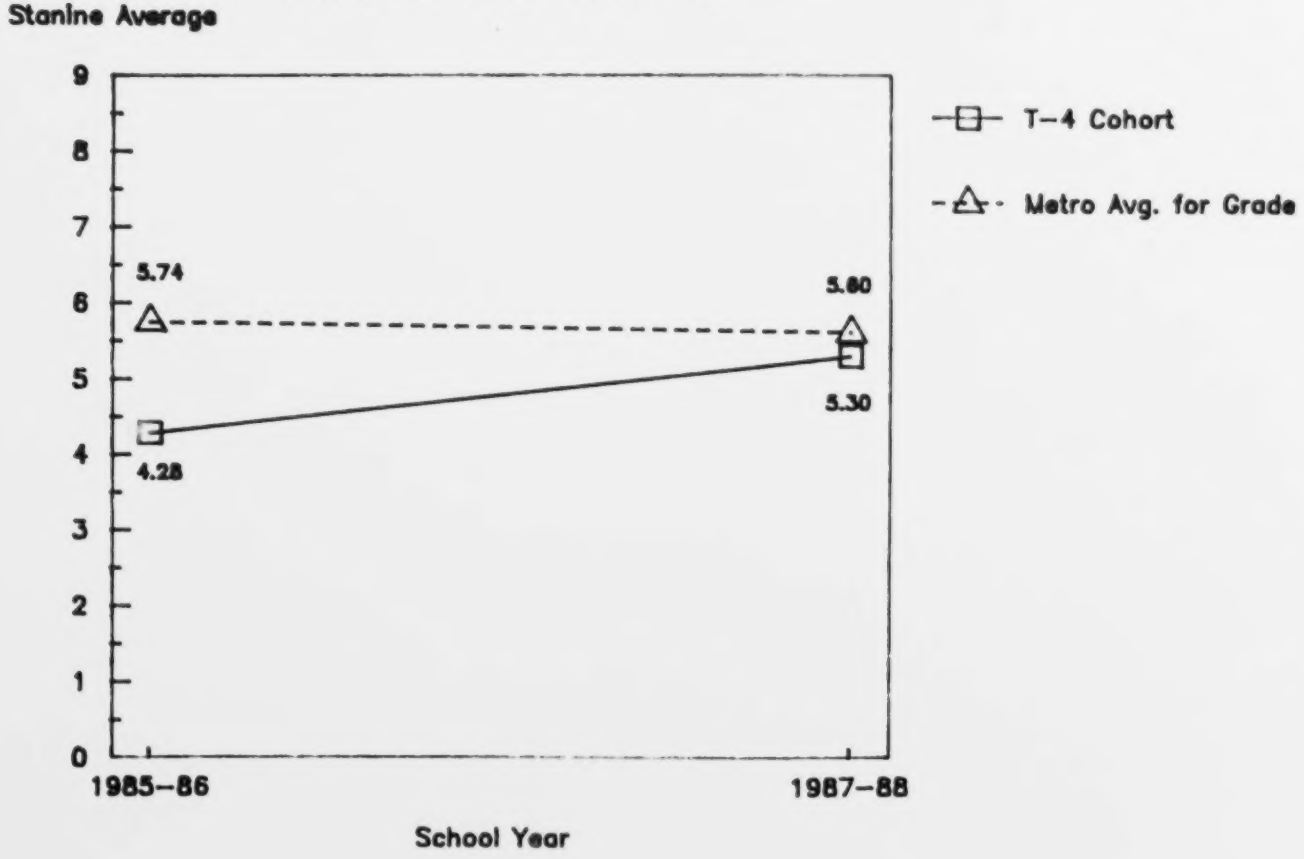
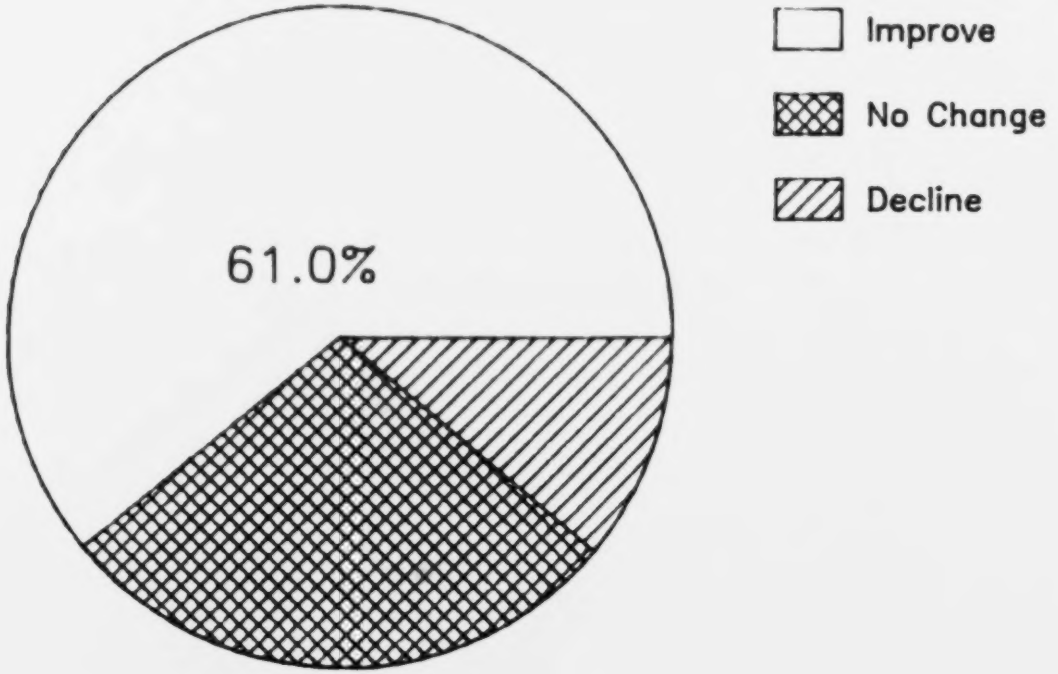


Table 39

Number and Percentage of T-4 Students Who Improved, Made No Change, or Performed Worse Based on Stanines for Stanford Primary 2 (Spring 1986) and Stanford Primary 3 (Midyear 1988) in Reading and Mathematics

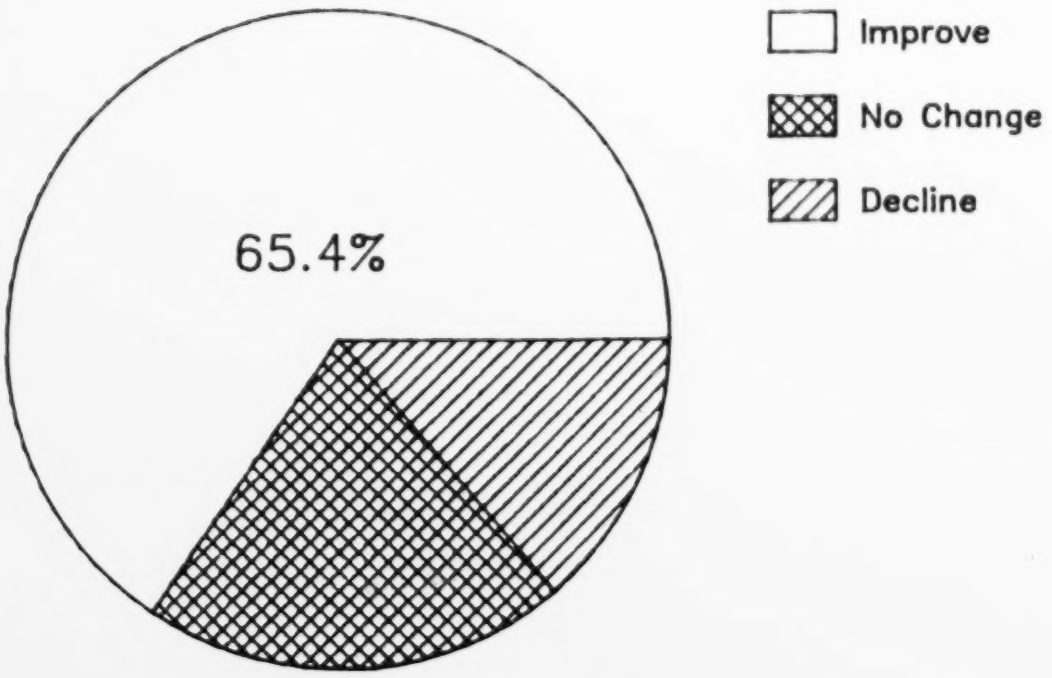
	Stanine Change from Spring 1986 to Midyear 1988	
	Number	Percent
READING		
Improved	153	61.0%
No Change	70	27.9%
Declined	28	11.2%
Total	251	100%
Wilcoxon Sign Ranks Test	z = -8.93	p = .0000
MATHEMATICS		
Improved	161	65.4%
No Change	51	20.7%
Declined	34	13.8%
Total	246	100%
Wilcoxon Sign Ranks Test	z = -8.65	p = .0000

FIGURE 35. CHANGES IN STANINE CATEGORIES
Total Reading: T–4 Cohort, 1987–88



Grade 2 vs. T–4

FIGURE 36. CHANGES IN STANINE CATEGORIES
Total Mathematics: T–4 Cohort, 1987–88



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2C. Transition 4: 1987-88

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TRANSITION EVALUATION

Summary

T-1 is designed to assist students who are old enough but not ready for regular first grade. The program was started in 1983-84 (see First Year Evaluation Report). This report covers T-1 from 1985-86 through 1987-88.

T-4 was implemented first in 1985-86 as an alternative remediation program. The program seeks to help students who have not mastered minimum skill requirements for grades one to three. T-4 results for 1985-86 through 1987-88 are addressed.

T-1, 1985-86 Cohort

Results were:

1) T-1 attendance rates remained about the same from T-1 (93.4%), to first grade (93.7%), to second grade (93.8%). Metro attendance rates were 93.2%, 94.4%, and 94.8% for kindergartners, first graders, and second graders for the same periods of time (Figure 3).

2) Total Reading stanine averages for 1984-85, 1985-86, 1986-87, and 1987-88 for T-1 students were 3.51, 6.86, 4.68, and 4.53, respectively. Metro Total Reading stanine average for 1984-85 (kindergarten) was 6.05 on the CAT-10; 6.26 in 1985-86 (kindergarten) on CAT-10; 5.35 in 1986-87 (first grade) on Stanford Primary 1; and 5.59 in 1987-88 (second grade) on Stanford Primary 2 (Figure 4).

3) Total Mathematics stanine averages for 1984-85, 1985-86, 1986-87, and 1987-88 for T-1 students were 3.75, 6.57, 4.55, and 4.99, respectively. Metro Total Mathematics stanine averages for 1984-85 (kindergarten) was 6.50 on the CAT-10; 6.75 in 1985-86 (kindergarten) on the CAT-10; 5.14 in 1986-87 (first grade) on SAT Primary 1; and 6.16 in 1987-88 (second grade) on Stanford Primary 2 (Figure 5).

T-1, 1986-87 Cohort

Results were:

1) Attendance rates for the T-1 cohort were 91.3% (kindergarten), 93.4% (T-1), and 93.8% (grade 1). Comparable rates for Metro were 93.2%, 93.0%, and 94.2% for kindergarten, kindergarten, and first grade, respectively (Figure 8).

2) Total Reading average stanines on the CAT-10 (kindergarten), SESAT 1 (T-1), and Stanford Primary 1 (grade 1) were 3.95, 6.64, and 4.88, respectively. Comparable scores for Metro kindergarten in spring 1986, kindergarten in midyear 1987, and grade 1 in spring 1988 were 6.26, 5.71, and 5.66 (Figure 9).

3) Total Mathematics scores were not available for comparison on CAT-10 and SESAT 1. However, in grade 1 the T-1 cohort had an average stanine score of 4.90 and the Metro average was 5.44 (Figure 10).

TRANSITION EVALUATION

T-1, 1987-88 Cohort

Results were:

1) Attendance rate for the T-1 cohort as kindergartners was 91.4% compared with 93.1% as T-1 students in 1987-88. Comparable attendance rates for Metro were 93.0% and 92.9% (Figure 13).

2) Total Reading average stanines on SESAT 1 improved (3.62 to 6.64) from kindergarten to T-1. Comparable grades in Metro scored 5.71 and 5.90, respectively (Figure 14).

3) SESAT 1 Mathematics (Part A) average stanine improved (3.12 to 5.76) from kindergarten to T-1. Comparable grades in Metro scored 5.11 and 5.27, respectively (Figure 15).

T-4, 1985-86 cohort

Results were:

1) Attendance rates changed from grade 3 (95.1%) to T-4 (94.3%) and declined in grade four (93.9%) and grade five (92.8%). Rates for comparable grades in Metro were 95.4%, 95.3%, 95.1%, and 94.3% (Figure 18).

2) Total Reading stanine averages improved for the T-4 cohort from second grade (3.63) to fourth grade (4.13) and fifth grade (4.10). Metro average stanines were 5.25, 5.21, and 5.35 for grades two, four, and five. (Figure 19).

3) Total Mathematics stanine averages on the Stanford Achievement Test improved from second grade to fifth grade, i.e., 4.25, 4.52, and 4.61, respectively. Metro averages were 5.72, 5.32, and 5.76 for comparable years (Figure 20).

T-4, 1986-87 Cohort

Results were:

1) Attendance rates remained the same (94.7%) for grade 3 and T-4, and declined to 94.0% in grade 4. Rates for comparable Metro grades were 95.3%, 95.1%, and 95.0% (Figure 23).

2) Total Reading stanine averages on the Stanford Achievement Test improved from second grade (3.11) to T-4 (4.58) and grade 4 (4.15). Metro averages for second, third, and fourth grades were 5.09, 5.23, and 5.28, respectively (Figure 24).

3) Total Mathematics stanine average on the Stanford Achievement Test improved from second grade (3.11) to T-4 (5.05) and grade 4 (4.62). Metro averages were 5.47, 5.29, and 5.35 for comparable grades (Figure 25).

TRANSITION EVALUATION

T-4, 1987-88 Cohort

Results were:

1) Attendance rates for grade 3 (94.3%) remained the same for the T-4 year. Attendance rates for comparable grades in Metro were 95.1% and 94.9% for the same years (Figure 28).

2) Reading performance on the average percentage of objectives mastered for the BSFAT improved 26.3 points from grade 3 (48.7) to T-4 (75.0) (Figure 29).

3) Math performance improved 26.7 points, from 53.0 to 79.7 (Figure 30).

4) Total Reading stanine averages on the Stanford Achievement Test improved from second grade in 1986 (3.81) to T-4 in 1988 (4.68). Metro averages for grades 2 and 3 for these years were 5.28 and 5.40 (Figure 33).

5) Total Mathematics improved from 4.28 (Grade 2) to 5.30 (T-4), while Metro averages for the respective years were 5.74 and 5.60 (Figure 34).

Conclusions

Transition Program classes have served nearly 7,500 students since the program was started in 1983-84. Until transition classes were added to the general education curriculum, there were few alternative programs which directly addressed the developmental and remedial needs of students.

The transition program has been acclaimed by parents, teachers, and principals as a welcome alternative to grade retention. Furthermore, there is strong objective evidence that the majority of participating students have been helped.

Attendance has improved for students in transition classes, and, even when there were occasional declines in attendance rates, they tended to follow the general trends across comparable grades. Academic achievement generally improved after a year in a transition class. In part this was undoubtedly due to the fact that the transition classes were taking a test of the same difficulty as the test taken the previous year. After a sharp one year increase, average scores often declined for the transition cohort, but not to the level of deficit (compared to comparable grade) exhibited prior to transition. Thus, while the initial gain seemed remarkable, the long term effects of the transition class were less fantastic but nonetheless impressive in that the "gap" between transition students and regular students has been diminished significantly.

TRANSITION EVALUATION

Analyses of percentages of transition students who improved, made no change, or declined in Stanford and Basic Skills test scores across successive administrations showed that most of the transition students made solid gains in stanine scores (Stanford) and percentage of objectives mastered (Basic Skills). The percentage of students making such gains compared to their previous individual performance was often as high as 80% to 90%.

While the process of being in a transition class has worked well for most participants, some children have continuing needs for assistance. Personal followup evaluations are particularly needed for children who continue to have achievement and school adjustment problems after having been in the transition program. Since students' needs vary so much, each child's situation must be examined on a case by case basis.

Comprehensive analysis of attendance and achievement test score data from nine cohorts of students in T-1, T-4, and T-7 programs going back to the 1983-84 school year has shown that the use of transition programs for selected developmentally delayed students can be an effective and reliable method of improving both academic and non-academic behaviors of these students. Significant findings have been consistent across all cohorts and all program levels.